Government of Karnataka

Information and Communication Technology (ICT)

Support Material

8th Standard

Level - III

FREE SUPPLY

Karnataka Residential Educational Institutions Society

No- 8, M.S.B -1, 6th and 7th Floor, Cunningham Road,

Bengaluru - 560052

Website: www.kreis.kar.nic.in, E-mail: edkreis@rediffmail.com

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ದ್ರಾವಿಡ ಉತ್ಕಲ ವಂಗಾ ॥
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ಉಚ್ಛಲ ಜಲಧಿ ತರಂಗಾ ॥
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Executive Director,
Karnataka Residential Educational Institutions Society
No-8, M.S.B-1, 6th and 7th Floor, Cunningham Road
Bengaluru - 560 052

GOVERNMENT OF KARNATAKA

INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

Support Material

8

EIGHTH STANDARD

LEVEL III

Karnataka Residential Educational Institutions Society
No-8, M.S.B -1, 6th and 7th Floor, Cunningham Road,
Bengaluru – 560 052

PREFACE

M.R. Hiremath K.A.S
Executive Director
KREIS, Bengaluru-20

Computers have become a way of life in the present day world. Everyone need to be educated about the implications of this technology. Now the Karnataka Residential Educational Institutions Society (KREIS) has proposed a course/textbook in this regards. The course outlined for this textbook is an attempt to design a generally friendly course that would not only be contemporary but also leaves sufficient scope for expansion into unknown realms of computer activity that may emerge in future.

The National Curriculum Framework 2005 recommends that theoretical component of Higher Secondary stage should emphasise on problem-solving methods and that the awareness of the historical development of key concepts be judiciously integrated into the content of a subject. It also recommends that given the pervasive impact of information and communication technology (ICT), a course related to this, should address this infrastructure challenge seriously and explore viable and innovative alternatives with regard to hardware, software and connectivity technologies appropriate for rural schools.

NCF 2005 speaks about the tremendous effectiveness of the information and communication technology in shaping modern society which has created the need for an educated public that can utilise such technology most effectively for the betterment of society and humankind. This book is aligned with these broad guidelines of NCF.

The book has been conscientiously designed and is the result of the renewed efforts of the textbook team comprising of computer teachers and subject experts. Some of the members worked at the advisory level while others worked towards the actual developmental activity. It is hoped that the students will appreciate the beauty and logic of information and communication technology. It has truly been a team work.

A conceptual coherence is derived with the pedagogy, the use of easily understandable language, simple mathematical formulations in a logical fashion. This book has some features which, we earnestly hope will enhance its usefulness to the students. Each chapter is provided with learning outcomes in the beginning and the worksheets at the end of each chapter.

I thank Dr. Shalini Rajanish, I.A.S, Principal Secretary, Former Department of Backward Classes and the then Vice Chairman, KREIS, Bengaluru, a National awardee on Sakala and Panchayat Raj whose spontaneous and continuous support for initiating this work with distinct guidelines and made it happen. We express our gratitude to Sri E.Venkataiah Retd I.A.S, Former Principal Secretary, Department of Social Welfare and the east while Vice Chairman of KREIS, Bengaluru who was the path maker for KREIS. Sri Gangaram Baderiya I.A.S, Principal Secretary, Department of Social Welfare and Vice Chairman, KREIS, Bengaluru. Sri Naveen Raj Singh, I.A.S, Principal Secretary, Department of Backward Classes and Dr. S.C Sharma, Former Vice Chancellor, Tumkur University, Karnataka, Prof. Rajaram Sharma, Joint Director, CIET, NCERT, New Delhi, Prof. A.N Ramachandra, Former Joint Commissioner, Navodaya Vidyalaya Samiti, New Delhi and also to the Director, DSERT, for supporting us with the task of preparing these textbooks. I thank our core team of computer teachers who worked restlessly for formulation of these text books in the leadership of Sri. A.T Chamaraja, Retd. Joint Director, Department of Public Education, Mr. Santosh Elemmi, Mr. Sunil C.S and Mr. Keerthi Kumar H.M.

We welcome suggestions and comments from our valued users, especially students and teachers. We wish our young readers a happy journey to the exciting realm of ICT-Support Material.

(M.R. Hiremath K.A.S)

FOREWORD

A N Ramachandra
Formerly- Joint Commissioner Acad
Navodaya Vidyalaya Samiti,
Min of HRD, Govt of India
an.ramachandra@gov.in

It is well said by Sir Winston Churchill that *"Men occasionally stumble over truth, but most of them pick themselves up and hurry off as if nothing ever happened"*. Computers have entered into classrooms so naturally than expected. While a decade ago teaching the school children about the use of computers was a challenge. Now children in even remote areas also know that a lot of fun can be understood by the touch of mobile screen. The 21st century digital children are at par with the *pace of the Technology* and its multiple dimensions affecting all spheres of their life.

What is planned to teach the children through this support material is to engross the children towards understanding the computer and its functional competency. This effort surely enhances the learning pattern and desired outcomes. Parting computer in the school curriculum brings paradigm shift from *teaching to learning* and also:

a. Use of computer by teacher increases their efficiency and quality of teaching.
b. Integration of ICT in curricular activities makes children learning a joyful event
c. Inter-disciplinary approach in learning brings higher order concepts
d. Computer aided learning gives impetus to Multiple Intelligence such as; Creative thinking and problem solving skills.

Let me also caution that this support material does not contain material to learn specific software. Further, learning computers is not designed as a substitute for learning core subjects. However, by association with the computer and with the help of this set of support material students will be able to explore the possibilities of using computer as a tool in enhancing knowledge, understanding of subjects and skills and concepts dealt in core subjects. I am happy to be associated with the team in developing this material to assist the teachers and children in Karnataka Residential Educational Institutions Society (KREIS). The team involved in this work has also taken into account the constraint like availability of time of the children in the Residential school pattern. Hence, lot of activities could be planned to be conducted after the class hours through a formal interaction with the computer teacher and the subject teachers, using the techniques explained in this support material. With this material it is expected to enhance collaborative activities and interdisciplinary approaches. The support material in this series has links from level to level. Over a period of 5 years students are expected to integrate ICT tools in their core subjects at ease. Although teachers can use their own methods to evaluate themselves the efficacy of use of this material from time to time , learning concepts explained in this set of support material is not expected to be evaluated through a formal set of examinations. The fun of learning the skills is incorporated in various exercises and activities recommended.

Special features maintained in series of support material are:

- Minimum skills required at the age group for operation have been attempted to be incorporated
- Time share of 100-120 periods (80 hrs per year) is planned
- Exercises and materials are designed in such a way that children Learn through independent operation and collaborative work
- Play-way/Conversation /interactive approaches are adopted
- Brand neutrality is maintained to avoid specific alignment to any particular brand
- Kannada compliant inputs are exhaustively attempted

I wish that teachers will make use of this material more informally to have full participation of the students in productive manner. I thank the Karnataka Residential Educational Institutions Society (KREIS) for reposing confidence in our entire team in developing the material. Thanks are also due to the team members who have invested valuable time and expertise.

(A N Ramachandra)

TEXTBOOK COMMITTEE

ICT – Support Material Level III

CHAIRMAN:

Sri. M.R. Hiremath $_{K.A.S}$, Executive Director, KREIS, Bengaluru.

MEMBERS:

Sri. Yuvaraj G T $_{M.Tech,}$ KRCRS, Hegadihalli, Channarayapatna Taluk, Hassan.

Sri. Chethan B.A $_{MCA}$, MDRS, Byrapura, Alur Taluk, Hassan.

Sri.Shivarajkumar Bhadrapur $_{M.Sc(CS)}$, KRCRS, Shirahatti, Shirahatti Taluk, Gadag.

Sri. Ghanashyam Mohan Mesta $_{MCA}$, KRCRS, Siddapur, Uttar Kannada.

Kum. Kavya $_{MCA}$, MDRS, Miyar, Karkala Taluk, Udupi.

COORDINATORS:

Sri. A.T Chamaraja, Rtd. Joint Director, Department of Public Education and Consultant, KREIS, Bengaluru.

Sri. Santosh Elemmi S.C $_{M.Sc(CS), M.Phil}$, KREIS, Bengaluru.

Sri. Sunil C.S $_{MCA, M.Tech, M.Phil}$, KREIS, Bengaluru.

Sri. Keerthi Kumar H M $_{B.E}$, MDRS, Belur Town, Belur Taluk, Hassan.

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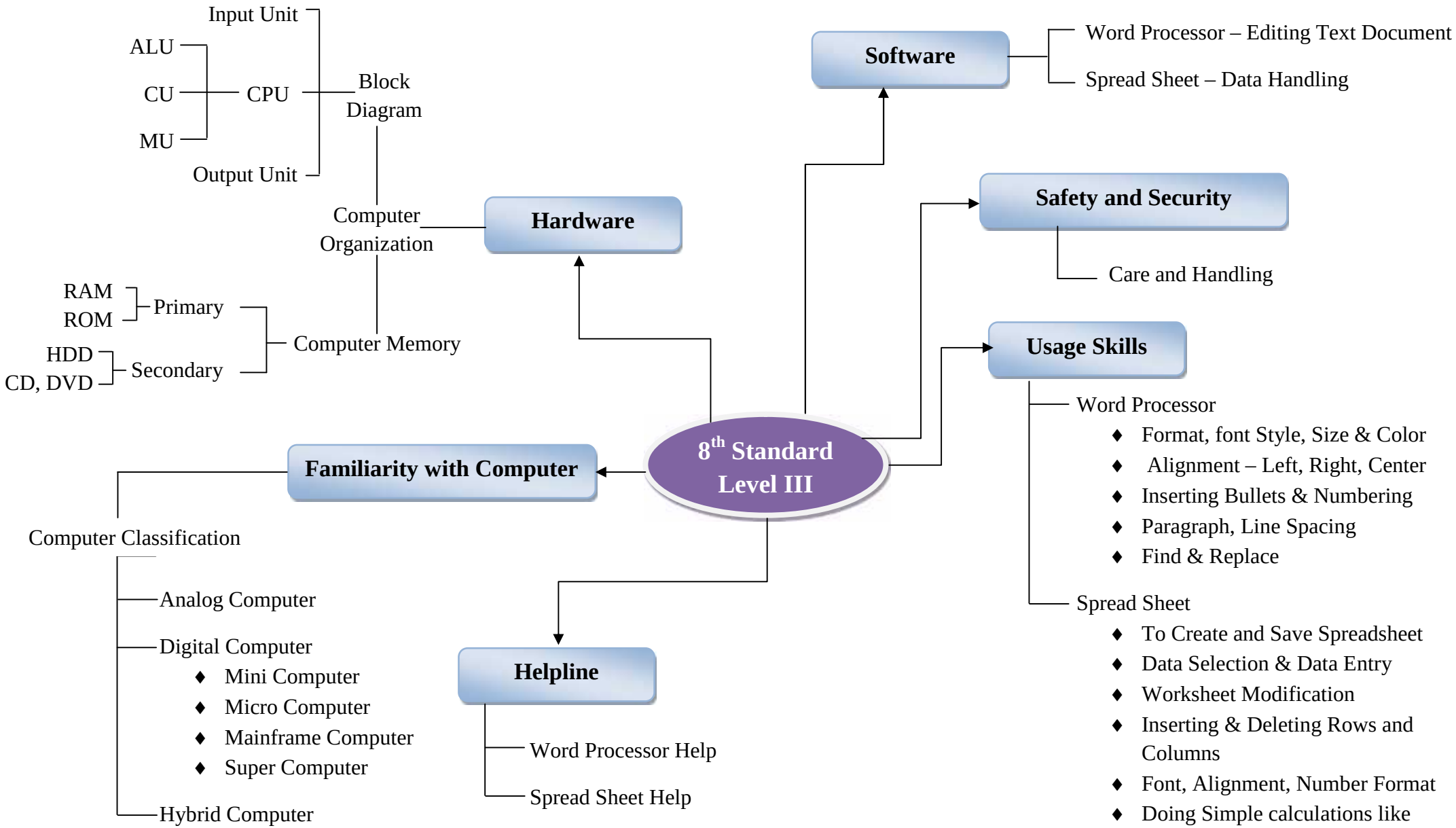
HOW TO USE THIS BOOK

This book is prepared for teaching about the computer to children. The teachers' role is primarily that of a facilitator encouraging active learning. Specific guidelines can be found in the Teachers' Corner at the end of the book. The teachers' should read all the books in a series before starting any class and understand the flow of content to ensure that the contents are comfortably transacted inside the classroom. Ensure that the conceptual understanding is mastered before proceeding to the skills. Use the Group Activities and Projects to stimulate creativity and knowledge sharing. The book can easily be covered in one year, with four classes (40 minutes) per week. See the table below for an overview of the concepts, objectives covered in each lesson along with periods.

Sl No	Topic Name	Concepts	Objectives	Periods
01	**Overview of Level II**	1. Generations of computer 2. Hardware and Software 3. Operating System 4. Typing Skills	➢ Recall and apply what was learnt in Level II.	**10 (5+5)**
02	**Classification of Computers**	1. Introduction 2. Analog Computer 3. Digital Computer 4. Hybrid Computer	➢ Classify computers based on data handling. ➢ List the features of different computers. ➢ Compare Analog and Digital Computers.	**12 (10+2)**
03	**Computer Organization**	1. Block Diagram of Computer 2. Computer Memory	➢ Write Block diagram of a computer. ➢ Identify different input, memory and output device. ➢ Compare primary and secondary memory	**14 (12+2)**
04	**Introduction to Word Processor**	1. Introduction 2. Structure of Word Processor Window 3. Closing/ Exit From Word 4. Comparison of Word Processor	➢ Open a Word Processor. ➢ Create and Save document. ➢ Print document.	**22 (6+16)**
05	**Formatting in Word Processor**	1. Introduction 2. Clipboard 3. Formatting text 4. Aligning the text 5. Bullets and Numbering 6. Paragraph 7. Find and Replace 8. Checking Spellings & Grammar	➢ Format and align the document. ➢ Insert bullet and numbering. ➢ Find the particular word. ➢ Check spellings and grammar.	**30 (6+24)**
06	**Introduction to Spreadsheet**	1. Introduction 2. Starting with Spreadsheet 3. Copying Cell content 4. Data selection and Data Entry 5. Worksheet Modification 6. Getting Help	➢ Create workbook. ➢ Enter and edit data. ➢ Manage worksheet.	**22 (6+16)**
07	**Formatting in Spreadsheet**	1. Formatting Cells 2. Cell Alignment 3. Number Format 4. Functions Library	➢ Read data given in a spreadsheet. ➢ Enter data and do basic calculations using a spreadsheet. ➢ Enter formula to compute average in a spreadsheet.	**30 (6+24)**

CONTENTS


8th Standard Level III
Familiarity with Computer
Computer Classification
Analog Computer
Digital Computer
Mini Computer
Micro Computer
Mainframe Computer
Super Computer
Hybrid Computer
Hardware
Computer Organization
Block Diagram
Input Unit
CPU
ALU
CU
MU
Output Unit
Computer Memory
Primary
RAM
ROM
Secondary
HDD
CD, DVD
Software
Word Processor – Editing Text Document
Spread Sheet – Data Handling
Safety and Security
Care and Handling
Usage Skills
Word Processor
Format, font Style, Size & Color
Alignment – Left, Right, Center
Inserting Bullets & Numbering
Paragraph, Line Spacing
Find & Replace
Spread Sheet
To Create and Save Spreadsheet
Data Selection & Data Entry
Worksheet Modification
Inserting & Deleting Rows and Columns
Font, Alignment, Number Format
Doing Simple calculations like sum, average etc on given data.
Helpline
Word Processor Help
Spread Sheet Help

Chapter 1: Overview of Level II

Inside

Revise the topics learned in the previous class.

- ☞ Generations of computer
- ☞ Hardware and Software
- ☞ Operating system
- ☞ Typing skills

Learning Objectives:

After you have studied this lesson you will be able to:

- ➢ Recall and apply what was learnt in Level II.

➢ Generations of Computer

- **First Generation of Computer (1945-1956):** It is started with using vacuum tubes as the basic components. The speed of these computers was very slow, storage capacity was very less and these computers were large in size. Example ENIAC, UNIVAC.
- **Second Generation of Computer (1956-1963):** In this generation transistors were used in place of vacuum tubes. These machines were much faster, more reliable than their earlier machines. It generates less heat and consumed less electricity as compared to first generation computers. Example IBM 1620, IBM 7094, CDC.
- **Third Generation of Computer (1964-1971):** In this generation Integrated Circuits (IC's) were used in place of transistors. These IC's were increased the speed of processing and storage capacity. These computers were more reliable, smaller in size and faster. Example IBM-360 series, Honeywell-6000 series.
- **Fourth Generation of Computer (1971-1980):** In this generation microprocessors were used in place of Integrated Circuits (IC's). The fourth generations of computers were marked by the use of Very Large Scale Integrated (VLSI) circuits. These computers were smaller in size. Example Mini Computer and Mainframe computer.
- **Fifth Generation of Computer (1980-till date):** In this generation computer involved the concept of Artificial Intelligence (AI) which made the computer think like human beings. This generation uses VLSI (Very Large Scale integration) and ULSI (Ultra Large Scale Integration) technology. Example Desktop, Laptop, Notebook and Robot.

➢ Hardware and Software

There are four parts in a computer system. They are:

- **Hardware**: The physical parts of a computer system called as hardware. Example Keyboard, Mouse, Monitor, Printer, RAM, CPU etc.
- **Software**: A Set or collection of programs is known as software. The software is a computer program written using some computer programming languages to operate the computer. Example Operating System, TUX Paint, Office Packages, Nudi, Adobe Reader, Computer Games etc.
- **Data**: Data is the raw information or basic facts that computer can process. Example all the information fed by the user.
- **User**(s): People who use the computer are called users.

- **Difference between Hardware and Software**

Hardware	Software
Physical components of a computer are called Hardware.	Set of programs is called Software.
Hardware can touch, see and feel.	The software can not touch and feel.
Constructed using physical materials or components.	Developed by the programming language.
Not affected by computer viruses.	Affected by computer viruses.
User cannot make copies	User can make copies
Example: Monitor, Keyboard, RAM	Example: OS, Text Editor, Nudi

➢ Operating System

"An **operating system (OS)** is a system software that manages computer hardware and software resources and which acts as an interface between the user and the computer". Example DOS, UNIX, Windows (XP, Windows7), Linux, Mac, Android, etc.

➢ DOS

MS-DOS is a computer operating system by Microsoft Corporation. It stands for "**Microsoft Disk Operating System**". DOS is a command - line based operating system, meaning that a user works with a keyboard to input data and receives output in plain text.

DOS commands are divided into two types

- Internal Commands: These commands are combined together and stored in Command.com file, which is an executable command file. Examples: CLS, DIR, DATE, MD, RD etc.
- External Commands: These commands are commonly external because either they require large requirements or not commonly used commands. Example: EDIT, LABEL, TREE, SORT etc.

- **Open the Command Prompt window**

1. Click Start button
2. Select Programs
3. In that go to Accessories
4. Click on Command Prompt

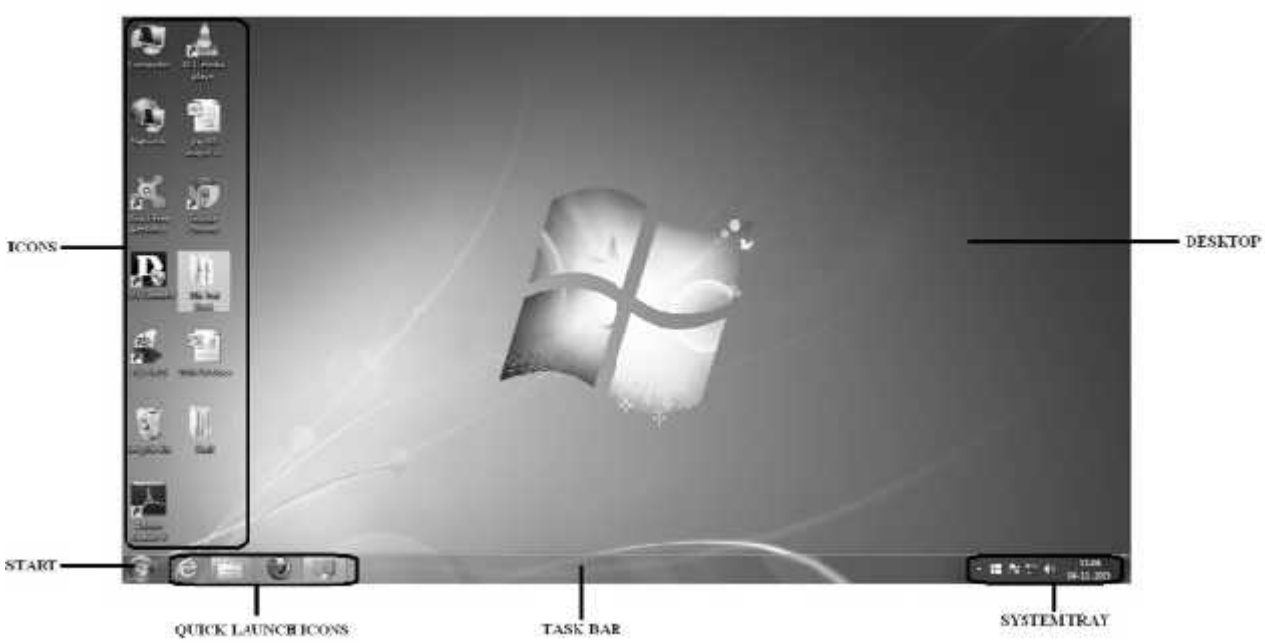
➢ Differences between DOS and UNIX

DOS	UNIX
Single user operting system	Multi User operting system
Simple and Basic	Powerful and customizable
Not Case sensitive	Case sensitive
DOS has command prompt	UNIX has a Shell
DOS has batch file	UNIX has shell scripts

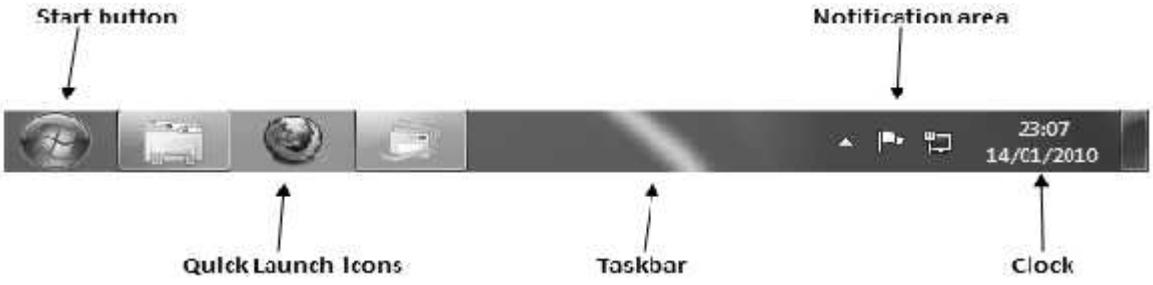
➢ Windows

Windows is a GUI based operating system developed by Microsoft Corporation to run Personal Computers. Currently, Windows is the most popular operating system used in Personal Computers.

♦ Exploring Desktop



A typical Windows desktop screen contains – Icons, Start button, Taskbar, System tray.



♦ **Icons**: These are the small picture / buttons that represent a file, or a folder, program, application. Clicking on these buttons respective software or files will be open.

- **Start button**: The button with the Windows logo on the left corner of the taskbar is called Start Button. It is used to access files, folders programs and settings through the Start Menu.
- **Taskbar**: It is a horizontal bar located at the bottom of the screen. The Taskbar allows the user to locate and launch programs through the Start Button or view any program that is currently open as small buttons.

- **Changing the Desktop Background:**
  1. Click the **Desktop Background** option in the bottom left corner of the **Personalize** window.
  2. Click on the desired picture.
  3. Click **Save changes** button.

- **Changing the Screen Saver**
  1. Click the **Screen Saver** option in the bottom right corner of the **Personalize** window.
  2. Choose the desired screensaver from the drop-down menu.
  3. Click **Apply** and then **OK** button

➢ Keyboard

The keyboard is a standard input device used for typing the text. The layout of the keyboard is like that of the traditional typewriter. Most companies use the standard PC keyboard of **104 keys**.

The keys on keyboard are broadly divided into 5 types, they are

- Alphabet Keys: A keyboard has 26 alphabet keys from A to Z. These keys help in typing the data in the form of text.
- Numeric Keys: These keys are used for typing the numbers. They are marked with the digits from 0 to 9.
- Symbolic Keys: These keys are used to enter the Special Symbols into the text document.

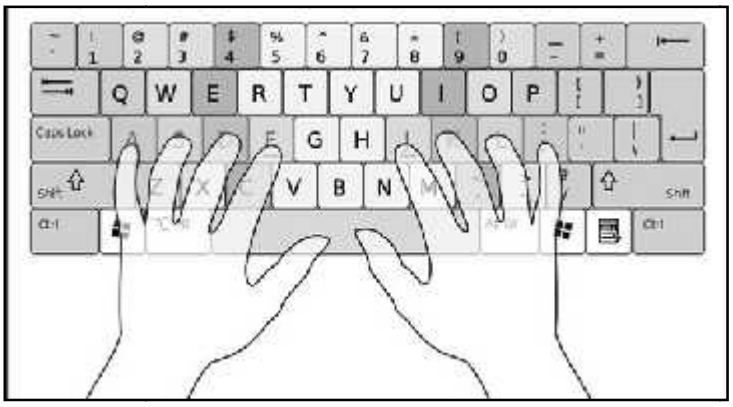
- Functional Keys: The functional keys are used for the special task. They are marked from F1 to F12. They are placed on top of the keyboard.
- Cursor Control Keys: Cursor is a blinking symbol that appears on the screen. The cursor control keys are used to move the cursor in any one of the four directions, i.e., up, down, left or right.
- Special Keys: Special keys are used to perform some special effects to be added to the text like giving space between words, for entering new line, delete selected text etc.,

➢ Basics of typing

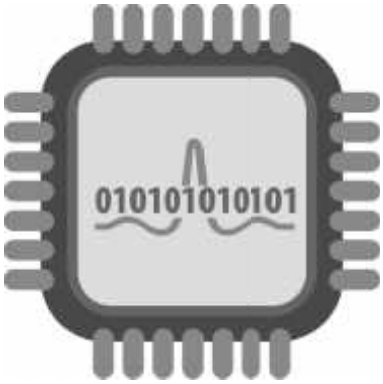
Now you have learnt about the keys on a keyboard, let us learn the basics of typing.

- Place the tip of the small finger of your left hand on the alphabet key ***"A"***
- Place the other three fingers of your left hand on the alphabet keys ***"S, D and F".***
- Your forefinger of the left hand is used for both ***F*** and ***G.***
- Place the small finger of your right hand on the ***" ; "*** key
- Place the other three fingers of your right hand on the alphabet keys ***" L, K*** and ***J"***
- Your forefinger of the right hand is used for both "***J*** and ***H"***

  All these steps were shown in the below figure.



Chapter 2: Classification of Computer



- Introduction
- Analog Computer
- Digital Computer
  - Mini Computer
  - Micro Computer
  - Main Frame
  - Supercomputers
- Hybrid Computer

Learning Objectives:

After you have studied this lesson you will be able to:

- Classify computers based on data handling.
- List the features of different computers.
- Compare analog and digital computers.

➢ Introduction

Computers differ based on their data processing abilities. They are classified according to purpose and data handling.

According to purpose, computers are classified into general purpose and specific purpose. **General purpose computers** are designed to perform a range of tasks. They have an ability to store numerous programs but lack in speed and efficiency. **Specific purpose computers** are designed to handle a specific problem or to perform a specific task.

According to data handling, computers are classified into three types

1. Analog Computers
2. Digital Computers
3. Hybrid Computers

➢ Analog Computers

Analog computers work upon continuous data. Computations are carried out with the physical quantities, such as voltages, length, current, temperature etc. The device that measures such quantities are analog devices. Analog computer operates by measuring rather than counting. The main advantage of analog computers is that all calculations take place in parallel and hence these are faster.

➢ Digital Computer

The digital computer works upon discontinuous data. They convert the data into digits (Binary Digit 0 and 1) and all operations carried out on these digits at extremely fast rates. A digital computer basically knows how to count the digits and add the digit. Digital Computers are much faster than an analog computer and far more accurate. Computers used for business and scientific applications are digital computers. Digital computer can be classified into four types:

1. **Mini Computers**
2. **Micro Computers**
3. **Main Frames**
4. **Supercomputers**

- **Mini Computers**

This type of computers are usually designed for real-time dedicated applications or as high performance, multiple user applications. Today's typical mini computer is a multiprocessor system running some flavor of UNIX for an operating system.

Example: Digital Alpha, IBM RS/6000, IBM 8000 series, Sun Ultra and PDP 11

IBM RS/6000

SUN ULTRA

Features of Mini computers

- They have less memory & storage capacity is less than mainframe computers.
- They offer a limited range of peripherals.
- Limited range of software's can be used by them.
- The end users can directly operate it.
- They are not very sensitive to the external environment and hence are more generalized.
- They are used for data processing.

- **Micro Computers**

Also, know as PC (Personal Computer), this is the most prevalent form of computers. Sitting in front of a standard desktop(or laptop), today PC's are single/Multiprocessor systems which can perform simple tasks such as word processing or spreadsheet calculations or demanding task such as graphic.

The first PC was built by IBM; today's PCs are built by a variety of vendors such as Dell, HP, HCL, and Lenovo or by users who build their own customized PCs using their preferred components.

Example: Desktops (PC, Macintosh), Laptops, Notebooks, Tablets, Palmtops, Smart Phones, etc.

Features of Micro computers

- They brought revolution in the history of computers.
- They are cheap and user-friendly.
- The main components are Monitor, CPU, Keyboard, Mouse, Speakers, Modem, and Printer.
- They are having limited peripherals attached to them.
- This type of computers can use a wide range of software's.
- They are used as desktops either in offices or even in homes.
- Their operation can be easily learned by anyone having the logical aptitude.
- Children enjoy playing games & watching movies in these computers.
- Most popular microcomputers processing chip manufacturing company is Intel.

♦ **Main Frame**

Applications which require high performance and generate and process a large number of truncations are generally hosted on mainframes. As an example, you can imagine a large amount of transactions that a major bank would have to process on a daily basis. To process a high volume of ATM, Cheques and electronic transactions. Most major banks rely heavily on mainframes.

Example: CDC 6600, IBM ES000 series, IBM S/390 etc.

Features of Main Frame

- They are big computer systems sensitive to temperature, humidity, dust etc.
- Qualified & trained operators are required to operate them.
- They have a wide range of peripherals attached.
- They have large storage capacity.
- They can use a wide variety of software's.
- They are not user-friendly.
- They can be used for more mathematical calculations.
- They are installed in large commercial places or government organizations.

	On May 11, 1997, an IBM computer called IBM **Deep Blue** defeated the world chess champion **Gary Kasparov** after a six-game match: two wins for Deep Blue, one for the champion and three draws.

♦ **Supercomputers**

Supercomputers are designed for ultra-high performance tasks such as weather analysis, encryption cracking, and the creation of animation. Supercomputers are large, expensive, massively parallel-processing machines usually owned by government agencies or large corporations.

Example: IBM Roadrunner, IBM Blue Gene, PARAM Padma, etc.

Features of Supercomputers

- They are huge computers installed in space centers, nuclear power stations etc.
- They are used for performing complex mathematical calculations.
- Only scientists and mathematicians can operate them.
- They are having huge memories & tremendous processing speed.
- They are used for weather forecasting, animation graphics etc.

♦ **Supercomputing in India**

India's supercomputer program was started in the late 1980s because Cray supercomputers were denied for import due to an arms embargo imposed in India, as it was a dual use technology and could be used for developing nuclear.

PARAM 8000 was India's first supercomputer. It was indigenously built in 1990 by Centre for Development of Advanced Computing and was replicated and installed at ICAD Moscow in 1991 under Russian collaboration.

Supercomputer	Organization
Anupam	Bhabha Atomic Research Centre (BARC)
SAGA-220	Indian Space Research Organization (ISRO)
EKA	Computational Research Laboratories
Vikram-100	Physical Research Laboratory
PARAM Yuva	Centre for Development of Advanced Computing

➢ Hybrid Computers

Hybrid computers incorporate the measuring feature of an analog computer and counting feature of a digital computer. For computational purposes, these computers use analog components and for storage, digital memories are used.

In these computers, some calculations take place in analog manner and rest of them takes place in a digital manner. Hybrid computers are best used in the hospital where the analog part is responsible for measurement of patient's heart beat, blood pressure, temperature and other vital signs and then the operation is carried out in a digital fashion to monitor patient's vital signs. Hybrid Computers are also used in weather forecasting.

➢ Differences between Analog & Digital computers

Analog Computer	Digital Computer
Operates on continuous values of data	Operates on discrete values of data
They give only approximate results	They give accurate results
Processing is slow	Processing is fast
They have very limited use	They are versatile
They have small memory & less reliable	They have large memory & more reliable

Chapter 3: Computer Organization

Inside

- ☞ Block Diagram of Computer
  - ❖ Input Unit
  - ❖ Central Processing Unit
  - ❖ Memory Unit
  - ❖ Output Unit
- ☞ Computer Memory
  - ❖ Primary Memory
  - ❖ Secondary Memory

Learning Objectives:

After you have studied this lesson you will be able to:

- ➢ Write block diagram of a computer.
- ➢ Identify different input, memory and output device.
- ➢ Compare primary and secondary memory.

➢ Introduction

Computer Organization refers to the Operational units and their interconnections that realize and recognize the specification of Computer. Computer Organization includes Hardware details transparent to the user between computer and peripherals and the memory technology used.

➢ Block diagram of a computer

A computer is designed using four basic units. They are:

1. Input Unit
2. Central Processing Unit(CPU)
    - Control Unit
    - Arithmetic and Logic Unit (ALU)
3. Memory Unit
4. Output Unit

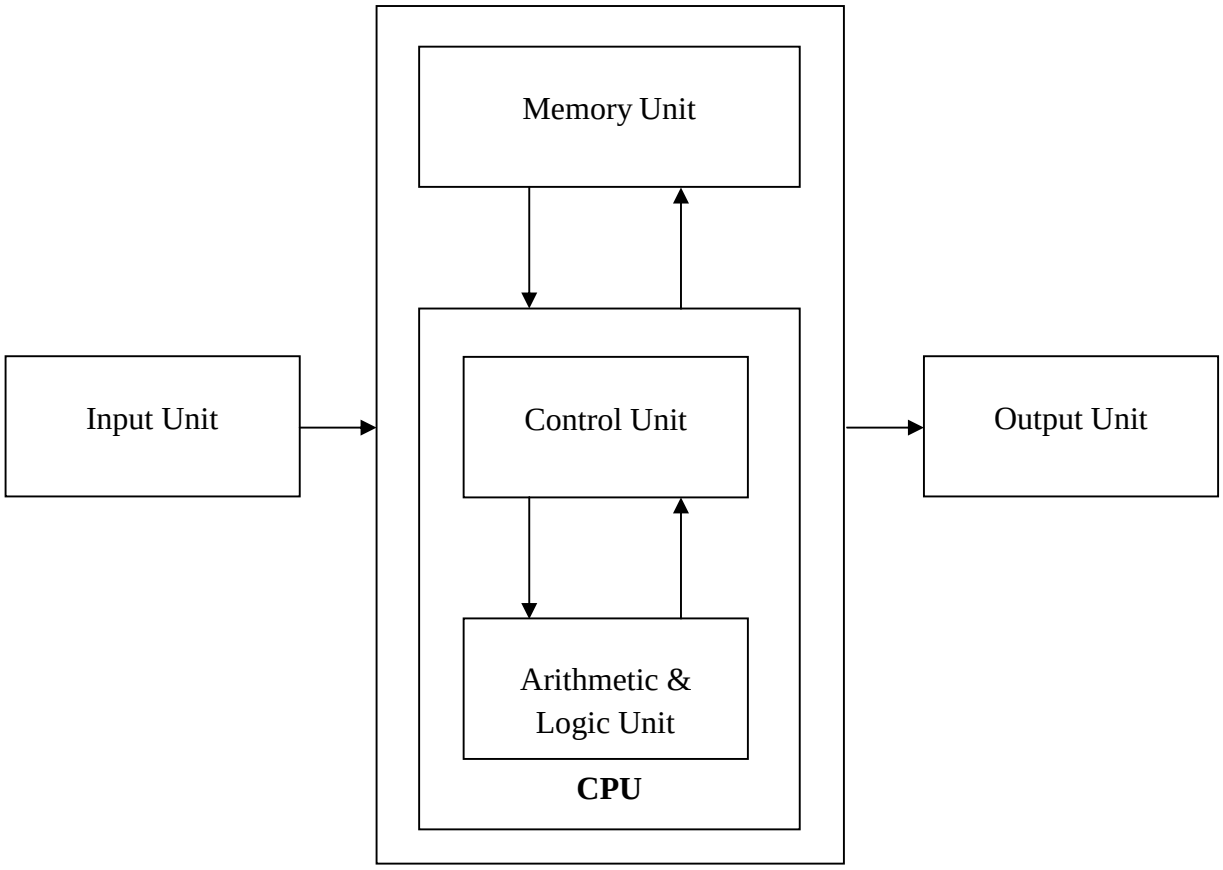


Fig: Block Diagram of Computer

- **Input Unit**

Computers need to receive data and instructions in order to solve a problem. The Input unit performs this operation. The Input Unit basically links the external world or environment to the computer system. The input unit may consist of one or more input devices. The Keyboard and mouse of a computer are the most commonly used input devices. Some of the input devices are given in the picture:

Input unit performs the following functions:

a) It accepts the instructions and data from the user.
b) Converts those instructions and data into computer understandable format.
c) Supplies the converted instructions and data to CPU for further processing.

- **Central Processing Unit (CPU)**

It is the main part of a computer system like the heart of a human being. Most computers are identified by the type of CPU that is present in them. The function of the CPU is to interpret the instructions in the program and execute them one by one. It consists of two major units.

 Know This!	The CPU is known to be the brain of the Computer System as it follows the instruction of the software/program to manipulate data into information.

1. **Control Unit:** How does the input unit know it is time to input data? How does the computer know that the execution of a job is complete? Why is it that, only the required output is displayed on the output unit and not everything?

Definition	Control Unit refers to functioning unit which carries out four basic operations, these are ▪ Fetches an instruction. ▪ Decodes the instructions. ▪ Executes the instruction. ▪ It stores the result.

All this is possible because of the control unit. It controls and directs the transfer of program instructions and data between various units. The main activity of the control unit is to maintain order and direct the operations of the entire system.

2. **Arithmetic and Logic Unit (ALU):** Arithmetic and Logic Unit performs arithmetic and logical operations and controls the speed of these operations. Arithmetic operations like addition, subtraction, multiplication and division (+,-,*, /) and logical operations like AND, OR, NOT and relational operations like (<,>, <=,>=) are being carried out in this unit.

♦ **Memory Unit**

The data and the instructions required for processing have to be stored in the memory unit before the actual processing starts. In a similar manner, the results generated from processing has to be preserved before it is displayed. The memory units thus provide space to store input data, intermediate results and the final output generated.

Secondary storage devices are additional memory (storage) devices such as floppy disks, magnetic tapes, Hard Disk Drive (HDD), Compact Disk (CD), Digital Versatile Disk (DVD) etc., which are used to store huge information for future use. The input unit, an output unit, and secondary storage devices are together known as **Peripheral Devices**.

- **Output Unit**

It is used to print or display the results, which are stored in the memory unit. The actual function of the output unit is just the reverse of the input unit. Thus, the output unit links the computer to the outside world. The Monitor and Printer are the most commonly used output devices. Some of the output devices are given in the picture:

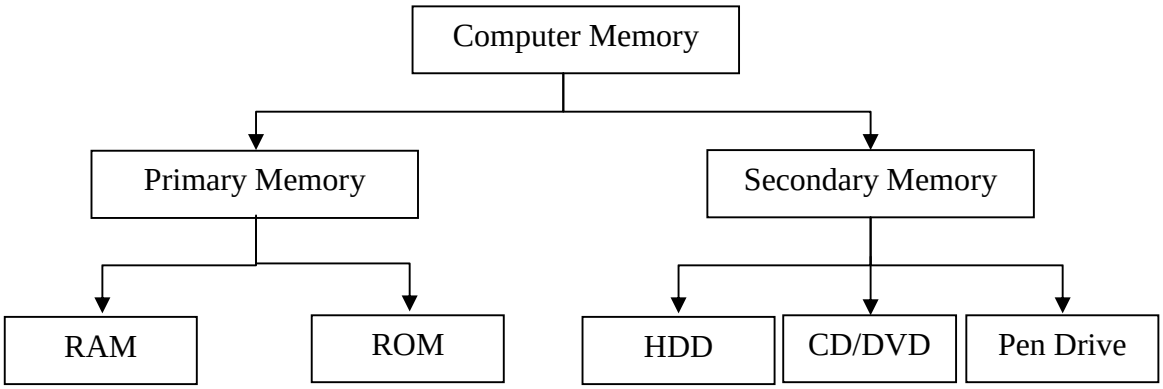
Output unit performs the following functions:

a) It receives the results from the CPU.
b) Converts those results into the human understandable format.
c) Supplies the converted result to the user.

➢ Computer Memory

A computer contains a number of components such as CPU, input devices, and Output devices and so on. We also use a number of other things such as instructions, programs and so on. All these are no use if you do not have data to work with. Data can be stored only in the memory of the computer.

Memory is an essential component of any digital computer. It is storing device. It stores programs and data, which is required by the CPU, and the results generated after processing.



There are two kinds of memory are commonly used in computers.

1. Primary Memory (Semi-Conductor Memory)
2. Secondary Memory (Magnetic Memory)

The storage capacity of a computer is measured in terms of Bytes. One byte includes a total of 8 individual units called as bits. One bit can store either a 0 or 1 in it. The table below gives the storage capacities.

Unit	Symbol	Binary Value	No. of Bytes	Equal to
Byte	B	2^0	1	1 B
Kilobyte	KB	2^{10}	1,024	1,024 B
Megabyte	MB	2^{20}	10,48,576	1,024 KB
Gigabyte	GB	2^{30}	1,07,37,41,824	1,024 MB
Terabyte	TB	2^{40}	10,99,51,16,27,776	1,024 GB
Petabyte	PB	2^{50}	1,12,58,99,90,68,42,624	1,024 TB
Exabyte	EB	2^{60}	11,52,92,15,04,60,68,46,976	1,024 PB
Zettabyte	ZB	2^{70}	1,18,05,91,62,07,17,41,13,03,424	1,024 EB
Yottabyte	YB	2^{80}	12,08,92,58,19,61,46,29,17,47,06,176	1,024 ZB

- **Primary Memory**

The Primary memory is the main memory of the computer. It stores the programs and data, which are currently needed by the CPU. The size of the main memory is comparatively much smaller than that of the secondary memory because of its high cost.

The CPU communicates directly only with the main memory. As the CPU works at very high speed, its matching memory must be very fast. Only primary memory devices can provide the matching speed. RAM and ROM's are used as the main memory of the computer.

Functions of the Primary memory include:

1. To contain a copy of the main software program (Operating System). This program is loaded into primary memory when the computer is turned on.
2. Temporarily store a copy of the application program that is currently being executed.
3. Temporarily store the data input from the keyboard, which is required for processing.
4. Temporarily store the result, which is generated from processing until it is transferred to an output device.

Primary memory is of two types

1. RAM (Random Access Memory)
2. ROM (Read Only Memory)

❖ **Random Access Memory (RAM)**

RAM is also called as the main memory of a computer. The user can write information into Ram and read information from it. RAM is accessible to users. The user enters his program and data into RAM, It has random access property. In a Random access memory, any memory location can be accessed in a random manner directly without going through any other memory location. The access time is same for each memory location.

RAM is a **volatile** memory. The information written into it is retained in it as long as the power supply is on. As soon as the power supply goes off (or is interrupted) its stored information is lost. The user has to reload his program and data into the RAM when the power supply is resumed.

❖ Read Only Memory (ROM)

When the computer is put on for the first time it has to perform a number of operations to start off such as checking the functioning of all the hardware components and the loading of the operating system into to the primary memory.

How does the computer know what to do? How does it know that all the hardware has to be checked for proper functioning? How does it know from where the operating system has to be loaded? Instructions to perform all these operations are present permanently in a memory called as the **ROM**.

ROM stands for "**Read Only memory**". It is **nonvolatile**, i.e., the information stored in it is not lost even when the power supply goes off. It is used for permanent storage of information.

♦ Secondary Memory

Since the storage capacity of the primary memory is not very large, it cannot hold a large amount of data, including programs, which may be needed for processing. Thus, secondary storage devices are necessary. Any additional storage used on a computer other than the primary memory may be classified as secondary memory or storage.

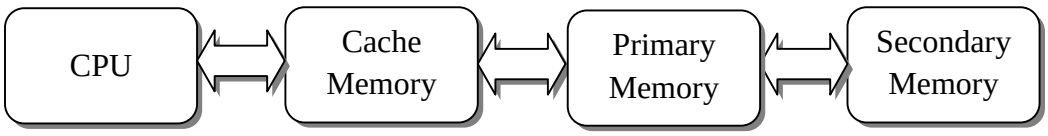
The secondary memory is used as auxiliary memory. The information, which is not being currently processed, resides in the secondary memory. The information, which is needed by the CPU for current processing, is transferred from the secondary memory to the main memory. The size of the secondary memory is normally large and the cost is also reasonable.

The secondary memory is used for bulk storage or mass storage of programs, data, and other information. It has much larger capacity than main memory. The secondary memory retains the information once stored on it. The magnetic memory such as Hard Disk Drive (HDD), Compact Disk, Pen Drive, Memory cards is the most commonly used secondary memory in the computer.

Primary Memory	Secondary Memory
Semiconductor memory.	Magnetic or Optical memory.
Volatile(Temporary)	Non-Volatile(Permanent)
Expensive	Less Expensive
Faster	Slower
Also called as Main Memory	Also called as Auxiliary Memory
Example: RAM, ROM	Example: HDD, Pen drive etc.

♦ **Cache Memory**

The cache memory (pronounced as cash) is placed in between the CPU and Main memory. It is a very high-speed semiconductor memory. Its access time is much less compared to that of the main memory. The cache memory is an intermediate memory and is not accessible to users. It stores instructions and data, which are to be immediately executed. It is used to reduce the average access time reading data, which normally stored in the main memory. Thus, the cache memory increases the operating speed of the system. But it is much costlier than main memory.



➢ Care and Handling of Removable Media

♦ **Optical Disks**

- Handle discs by the outer edge or the center hole. Don't touch the surface of the disc.
- Don't bend the disc; use a non-solvent-based permanent marker to mark the label side of the disc.
- Store discs upright (book style) in plastic cases specified for CDs and DVDs. Don't Store discs horizontally for a long time (years). Return discs to storage cases immediately after use.
- Store discs in a cool, dry, dark environment in which the air is clean. Don't expose discs to extreme heat or high humidity.

- Check the disc surface before recording. Don't write or mark in the data area of the disc (the area the laser "reads").

♦ **Flash Drive**

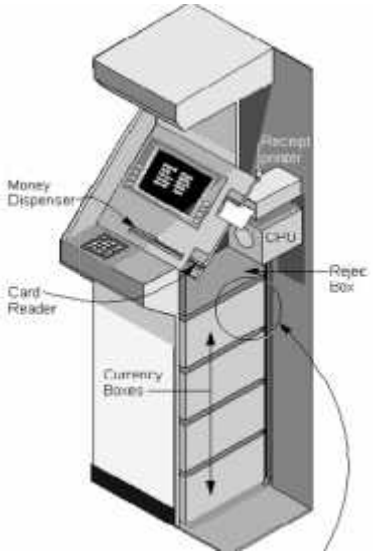
- When not in use, it must be kept in a secure place.
- Away from high temperature.
- Keep the connector (the metal portion inserted into the USB port) covered so that dust and dirt will not accumulate inside.
- After use, do not remove the flash drive immediately from the USB port. Make it a practice to always use "safely remove" procedure before pulling it out of the USB port.

Explore!

ATM

ATM (Automated Teller Machine), now it's making people's life very easy as they get their money when they need. To get rid of this burden they need to deposit money in the bank by opening an account and then the bank will be given a Card i.e. an ATM card with a PIN number to them. By using that they can withdraw money from any ATM machine of that bank. When they insert the card into the machine and the PIN number the machine will show few instructions on the screen. By that time verification (PIN Number and Account Number) will be done with the main bank computer as they are connected. If the verification is correct then the user will choose an instruction and the ATM will dispense money to the card holder.

Internal Structure of ATM



In the pictures, we have the internal structure of two different type of ATM machine. And also, it can be divided into two different parts: Upper Unit and Lower Unit.

In the upper unit, it has the CPU that processes and validates customer details by connecting to the bank computer after the customer has entered ATM card. This ATM has few layered boxes in the lower unit of it. These boxes are called currency boxes or cassettes where currencies are kept for withdrawal or the deposited money to be kept. A rubber roller is there to check if more than one banknote is moving and also a sensor to see that more than one banknote or bill stuck together or not when cash is dispensing. There is a receipt printer as we see in the figure to print current statistics of the cardholder's account or every times cardholder withdraws cash.

- **Card Reader**: Customer inserts their card into it when there is written "Please Insert your card" on the screen.
- **Keypad**: Use for PIN code input, choices, the amount of money etc as the input to the ATM machine.
- **Display Screen**: This screen shows all the instructions or options for the customers' convenience.
- **Screen Buttons**: When options are given on the screen one user can choose any of the options accordingly by the use of a button on the left or right side of the screen. These buttons select the option from the screen.
- **Cash Dispenser**: Withdrawal money is given by this slot.
- **Deposit Slot**: To deposit money this slot is used.
- **Speaker**: Speaker provides the facilities to customer by giving auditory feedback.

Chapter 4: Introduction to Word Processor

- Introduction
- Structure of Word Processor Window
- Operation on Word document
  - Creating a new document
  - Saving a new document
  - Open the existing document
  - Printing the document
  - Closing/ Exit from Word
- Comparison of Word Processor

Learning Outcomes:

After you have studied this lesson you will be able to:

- Open a Word Processor.
- Create and Save a document.
- Print a document.

➢ Introduction

Word processor is an application program that allows you to create letters, reports, newsletters, tables, form letters, brochures, and Web pages. Using this application program, you can add pictures, tables, and charts to your documents. You can also check spelling and grammar.

Word processor provides much more flexibility than a text editor, and would generally be used when one wishes to create a document to be read by others. There are many flavors of Word Processor programs like Microsoft Word, Open Office Writer, Libre Writer etc,

♦ Main features of Word Processor

- You can create documents fast, using built-in and custom templates.
- You can easily manage large documents using various features like the ability to create a table of contents, index, and cross-references.
- You can work on multiple documents simultaneously
- With the help of mail merge, you can quickly create merge documents like mass mailings or mailing labels.
- The print zoom facility scales a document on different paper sizes and allows you to print out multiple pages on a single sheet of paper.
- You can export and save your word documents in Portable Document Format (PDF).

♦ Starting with Word Processor

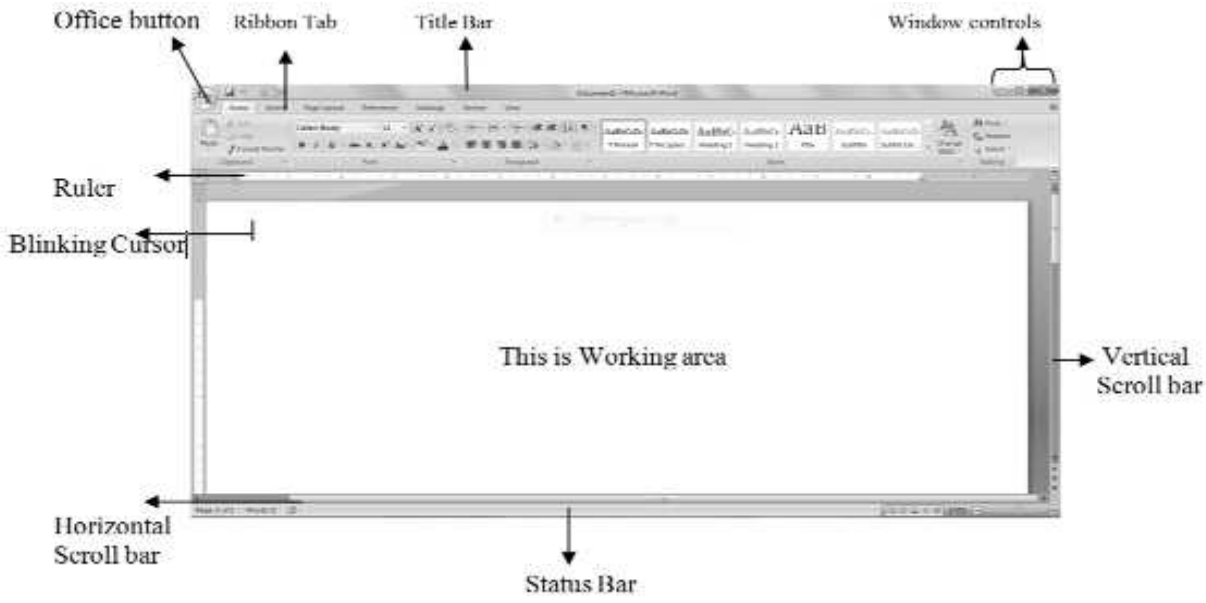
Following steps show how to start Microsoft Office Word:

Step 1: Click the **Start Button** - then Start Menu appears
Step 2: Select **All Programs**
Step 3: Go to **Microsoft Office**
Step 4: Select **Microsoft Office Word**

➢ Structure of Word Processor Window

Let us discuss the important components of the startup screen of Word Processor:

- **Office button**: The office button is located on the upper-left corner of the window. It contains a menu of file related commands such as New, Open, Save, Print, Exit, etc



- **Title Bar:** Title Bar is the top most bar in the Word Window. It displays the name of the currently active Word document. It also contains three buttons namely minimize, restore and close button at the right corner.
- **Ribbon Tab: It** is located just below the title bar. It has several tabs such as Home, Insert, View, Page layout, etc.
- **Scroll Bar:** It is used to move the window viewing area like up, down, left and right. Horizontal and Vertical Scrollbar are used to move the window.
- **Ruler Bar:** It is located below the toolbars. There are vertical and horizontal rulers. The ruler bar allows you to format the vertical and horizontal alignment of the text in a document.
- **Workspace:** The workspace is the area in the document window where you enter/type the text.
- **Status Bar:** It appears at the left bottom corner of the window. It indicates current page, section number and a total number of words in a document.

Definition	A blinking vertical line on screen is called cursor "|"

➢ Operations on Word Processor document

The Word Processor basic operations are

- Creating a New Document
- Saving New Document
- Open the Existing Document
- Printing the Document
- Closing/ Exit From Word

♦ Creating a new document 

The steps involved in creating a new document are

1. Click the **Office button** 
2. Click the **New** option and then select **Blank Document.**

♦ Saving the document 

To reuse the document we have to save the file.

1. Click the **Save** button on the title bar. (Or)
2. Click the **Office button**
3. Select the **Save** option

	• The file in a word processor will have the extension ".odt", ".docx", ".sdw" • By default, the file will be stored in a folder named Documents

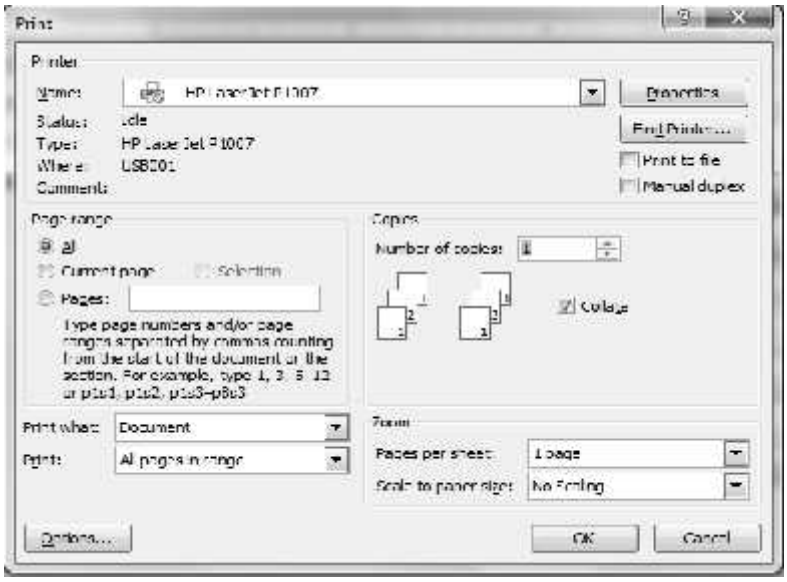
♦ Opening existing document 

If you have to open an existing document, then follow any one of the steps given below.

1. Click the **Office button**
2. Select the **Open** option
3. An **open** dialog box will be displayed.
4. Select the drive that contains the document. The list of folders and files are displayed.
5. In the list of files, select the document name.
6. Click on **Open** button. Then selected document will be opened.

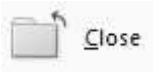
♦ **Printing the document** 

When the document is ready to print, click the **Print** button on the office button. **Print preview** option allows you to preview and make changes to pages before printing.



Different options in Print dialog box.

- To print selected text, choose **Selection** option.
- To print only the page where the cursor is placed, select the **Current page** option.
- To print a range of pages, or specific pages, select the **pages** option and type the page numbers in the box. For example Type 3 to print only third page. Type 3-6 to print the third page to the sixth page.
- To print only odd or even pages, select the option odd or even from the **Print** list box and click **OK**

♦ **Closing/Exiting the document** 

The steps involved in creating a new document are

1. Click the **Office button**
2. Select the **Close** option

Exit from Word 

The steps involved in Exit from Word the document are

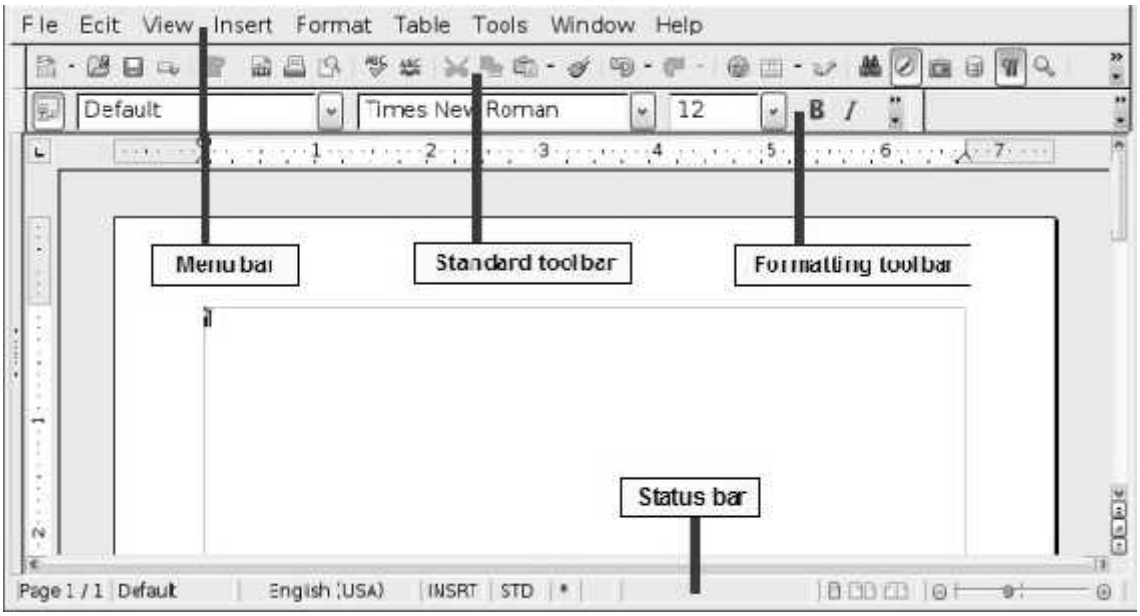
1. Click the **Office button**
2. Select the Exit word option

➢ Openoffice.org Writer

Openoffice.org Writer is the word processor component of Open Office (OO). In addition to the usual features of a word processor (spelling check, thesaurus, hyphenation, autocorrect, find and replace, automatic generation of tables of contents and indexes, mail merge, and others).

Writer provides these important features:

- Templates and styles.
- Page-layout methods, including frames, columns, and tables.
- Embedding or linking of graphics, spreadsheets, and other objects.
- Built-in drawing tools.
- Master documents—to group a collection of documents into a single document.
- Change tracking during revisions.
- Database integration, including a bibliography database.
- Export to PDF, including bookmarks.



♦ Menu bar

The Menu bar is located across the top of the Writer window, just below the Title bar. When you choose one of the menus, a submenu drops down to show commands.

- The file contains commands that apply to the entire document such as Open, Save, and Export as PDF.

- Edit contains commands for editing the document such as Undo and Find & Replace.
- The view contains commands for controlling the display of the document such as Zoom and Web Layout.
- The insert contains commands for inserting elements into your document such as headers, footers, and pictures.
- The format contains commands for formatting the layout of your documents, such as Styles and Formatting, Paragraph, and Bullets and Numbering.
- The table shows all commands to insert and edit a table in a text document.
- Tools contain functions such as Spell-check, Customize, and Options.
- The window contains commands for the display window.
- Help contains links to the Help file; information about the program.

♦ **Toolbars**

The writer has several types of toolbars: The top toolbar (default position) is called the **Standard toolbar**. The Standard toolbar is consistent across the OpenOffice.org applications.

The second toolbar across the top (default location) is the **Formatting toolbar**. It is a context-sensitive bar that shows the relevant tools in response to the cursor's current position or selection. For example, when the cursor is on a graphic, the Formatting bar provides tools for formatting graphics; when the cursor is in the text, the tools are for formatting text.

♦ **Status bar**

The Writer status bar provides information about the document and convenient ways to quickly change some document features.

 Remember	**Keyboard Shortcut Keys**
New	Ctrl + N
Open	Ctrl + O
Save	Ctrl + S
Print	Ctrl + P
Close	Ctrl + W
Exit	Alt + F4

Chapter 5: Formatting in Word Processor

- Introduction
- Clipboard
- Formatting text
- Aligning the text
- Bullets and Numbering
- Paragraph
- Find and Replace
- Checking Spellings & Grammar

Learning Outcomes:

After you have studied this lesson you will be able to:

- Format and align the document.
- Insert bullet and numbering.
- Find a particular word.
- Check spellings and grammar.

➢ Introduction

♦ Typing and inserting text

- To enter text, start typing using the keyboard.
- The text will appear where the blinking cursor is located '|'.
- Move the cursor by using the arrow buttons on the keyboard or positioning the mouse and clicking the left button.
- The keyboard shortcuts listed below are also helpful when moving through the text of the document.

Move Action	Shortcuts
Beginning of the Line	Home
End of the Line	End
Top of the Document	Ctrl + Home
End of the Document	Ctrl + End

♦ Selecting Text

To change any attributes of text, it must be selected first.

- Select the text by dragging the mouse over the required text, while keeping the left mouse button pressed, or
- Hold down the Shift key on the keyboard while using the arrow buttons to select the text.

The following table shows techniques for selecting the text.

Selection	Technique
Whole Word	Double Click on the word
Whole Paragraph	Triple-click within the Paragraph
Several words or Lines	Drag the mouse over the words or hold down Shift while using the arrow keys.
Entire Document	Choose Select option followed by Select All in menu bar Or Press **Ctrl + A**

♦ **Deleting the text**

Use the Backspace and Delete Keys on the keyboard to delete text.

- Backspace key will delete text to the left of the cursor.
- Delete key will delete the text to the right of the cursor.
- If a large amount of text is to be deleted, then select the text using any of the methods mentioned in the above table and press the Delete key.

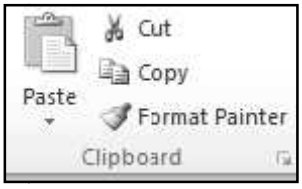
➢ Clipboard

The clipboard is a temporary holding area for information. It contains:

Cut the selection from the document and put it on clipboard

Copy the selection and put it on clipboard

Paste the contents of the clipboard.



Format Painter: copy formatting from one place and apply to another.

♦ **Cut and Paste**

Steps:

1. Select the relevant text or object.
2. Click the **Cut** button on the Home ribbon
3. Place the cursor at the point where you would like to add the text.
4. Click the **Paste** button.

♦ **Copy and Paste**

Steps:

1. Select the relevant text or object.
2. Click the Copy button on the Home ribbon.
3. Place the cursor at the point where you would like to add the text.
4. Now click the Paste button.

Getting Help	To use Word Processor help, click the Help button in the upper right corner of the window or press the **F1** key on your keyboard.

➢ Undo and Redo

The **UNDO** and **REDO** features will keep a list of 100 actions that you have performed, and it allows for taking "one step" backward in order to erase what you have just done.

- **UNDO** and **REDO** features reside on Quick Access Toolbar 
-  Click on the **UNDO** button to go back one step.
- Click on the **REDO** button to go forward one step. 

➢ Formatting Text

Formatting means changing the style and design of text and objects in the document in a proper way and this can be achieved using the formatting toolbar.

♦ **Font**

The font is a style to change the appearance of character/text. Font clipboard is located in home ribbon tab.

 *Note*	Before applying the **Font,** make sure that the text is selected

♦ **Font Face**

Selecting a different font is called changing the font type. Some of the commonly used fonts are Calibri, Times New Roman, Arial and Dejavu sans.

1. Select the relevant text. This can be anything from a single character to the entire document.
2. Select **Font** on the font group.
3. Click the **Drop-Down** on the **Font Face**.
4. Select the required Font face name.

Example

This text is in Calibri

This text is in ALGERIAN

This text is in Lucida Console

Know This!	Default font face in • Microsoft word 2007 is Calibri. • Openoffice.org is Times New Roman

♦ **Font Size:**

1. Select the relevant text.
2. Select **Font Size** on the **Font** clipboard.
3. Click the **Drop-Down** on the **Font Size**.
4. On the list, select **Font Size** and click it.

Example

This text is in font size 10

This text is in font size 14

This text is in font size 18

Know This!	You can also specify your own font size. Just click in the Font Size field and type in the size that you would like, then press [ENTER]. The size must be between 1 and 1638 and can include "half sizes" such as 12.5.

♦ **Font style: Bold, Italic, and Underline**

The steps involved in changing the selected text to Bold, Italic and Underline are.

1. Select the relevant portion of the text.
2. Select the following option on the font clipboard.
   - **B** for **Bold** (Keyboard shortcut **Ctrl + B)**
   - *I* for *Italic* (Keyboard shortcut **Ctrl + I)**
   - U for Underline (Keyboard shortcut **Ctrl + U)**

The arrow next to the underline button offers you a choice of underlining styles.

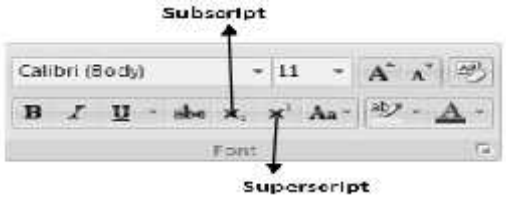
3. To turn a character format off, click the same button again.

Note	You can select multiple formatting characteristics at the same time, for example by clicking Bold and then Italic.

♦ **Superscript and Subscript:**

Superscript refers to numbers that are positioned slightly higher than the text on the line.

Example: 2^3, $(a+b)^2$ etc.



To make text superscript,

1. Select the relevant portion of the text.
2. Click on **Home** tab,
3. Choose the **Superscript** option in the **Font** group.

Subscript refers to numbers that are positioned slightly lower than the text on the line.

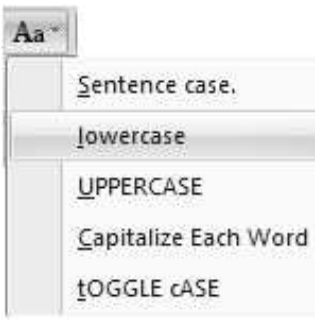
Example: $10_{(2)}$, H_2O etc.

To make text subscript,

1. Select the relevant portion of the text.
2. Click on **Home** tab,
3. Choose the **Subscript** option in the **Font** group.

♦ **Change case**

This option changes all the selected text to uppercase, lowercase or other common capitalization.



Example: KARNATAKA

When we change this word by selecting a lowercase option, it becomes karnataka.

- **Change the text color**

To make selected font color of a text: 

1. Select the text.
2. On the **Font** group Click **Font Color**, and then select the color.

➢ Aligning the Text

Alignment is a way of arranging text and objects in the document. We can arrange text and objects in four ways.

1. Align Text Left 
2. Center 
3. Align Text Right 
4. Justify 

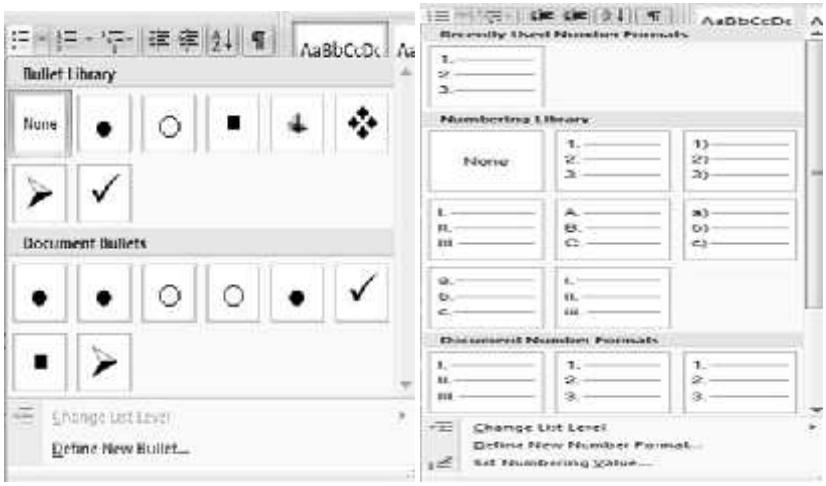
Align text left: Text is aligned at the left margin but jagged on the right. The text in this box is aligned left.	**Align Text Right:** Text is aligned at the right margin but jagged on the left. The text in this box is aligned right.
Center: Text is centered within each line, with jagged margins on both left and right. The text in this box is aligned center.	**Justify:** Text is aligned to both the left and right margins, adding extra space between words as necessary. The text in this box is justified.

➢ Bullets and Numbering

1. Click the **Bulleted List** button  (or) **Numbered List** button  from the paragraph tab.
2. Type the first entry and press ENTER key. This will create a new bullet or a number on the next line.

Bulleted List	Numbered List
• Bananas • Milk • Eggs • Ice Cream	1. Bananas 2. Milk 3. Eggs 4. Ice Cream

Note	You can type the text first, then highlight the section and click on the **Bulleted List** or **Numbered List** buttons to add bullets or numbers.



- **Multilevel List**

To create a nested list, such as a numbered list under a bulleted list, follow these steps: Type the list and increase the indentation of the items that will make up the nested list by clicking the Increase Indent button on each item.

Example:

- Karnataka
  - Hassan
    - Alur
    - Belur
      - Residential Schools
  - Mysore
    - K R Nagara
    - Nanjanagudu
      - Residential Schools

➢ Paragraph

- **Line spacing**

Line spacing determines the amount of vertical space between the lines of text in a paragraph. Paragraph spacing determines the amount of space above or below a paragraph.

To change the spacing before and after selected line and paragraphs;

1. Select the line/paragraph before or after which you want to change the spacing.
2. On the Home tab, in **Paragraph**, click **Line Spacing**
3. Click on Line Spacing Options, and select options.

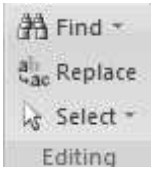
- **Indent paragraphs**

Indentation determines the distance of the paragraph from either the left or the right margin. Within the margins, one can increase or decrease the indentation of a paragraph or group of paragraphs.

Increases Indent level of the paragraph

Decreases Indent level of the paragraph

➢ Find and Replace



- **Find**: It is used to quickly search for every occurrence of a specific word or phrase.
- **Replace**: It is used to automatically replace a word or phrase with another — for example, you can replace MDRS with KRCRS.

For replacing a specific word, follow the steps:

1. Select **Find** option from editing clipboard on home.
2. It displays Find and Replace dialog box.
3. Enter the text to be searched in the **Find** What text box.
4. Select All options in search list box (indicated by More buttons)
5. Select **Replace All** to begin the search. It highlights the first occurrence of the text to be searched in the document.
6. Selecting Find Next continues to search for next occurrence.

➢ Check spelling and grammar

While typing, we make mistake in spelling or we don't know the spelling of some unknown words. Thus, a spell check is a great tool for making the document a mistake free.

1. Open a Word document that needs to be checked.
2. On the **Review** tab, in the **Proofing** group, click **Spelling & Grammar** or Press **F7**

3. **Spelling and Grammar** dialog box appears. The first suggested correction is highlighted. Example: Change the fon style verdana and font size to 10 Here, Spelling and Grammar option giving the suggestions for the mistaken word fon.

Remember	**Keyboard Shortcut Keys**
Cut	Ctrl + X
Copy	Ctrl + C
Paste	Ctrl + V
Undo	Ctrl + Z
Redo	Ctrl + Y
Bold	Ctrl + B
Italic	Ctrl + I
Underline	Ctrl + U
Subscript	Ctrl + =
Superscript	Ctrl + Shift+ +
Grow Font	Ctrl + >
Shrink Font	Ctrl + <
Align Left	Ctrl + L
Align Right	Ctrl + R
Align Center	Ctrl + E
Justify	Ctrl + J

Chapter 6: Introduction to Spreadsheet

- Introduction
- Starting with Spreadsheet
- Copying cell content
- Data selection and data entry
- Worksheet modification
- Getting help

Learning Outcomes:

After you have studied this lesson you will be able to:

- Create workbook.
- Enter and edit data.
- Manage worksheet.

➢ Introduction

Spreadsheets are designed to record and analyze numbers and data. Spreadsheets are very widely used for accounting and financial purposes.

A spreadsheet is a grid of rows and columns and is also called as a worksheet. The database component manipulates lists of information. The chart component creates charts that help to present data in a graphical manner.

There are many spreadsheet programs available like Open Office Calc, Microsoft Excel, Libre Calc, etc.

➢ The features of Spreadsheet Program

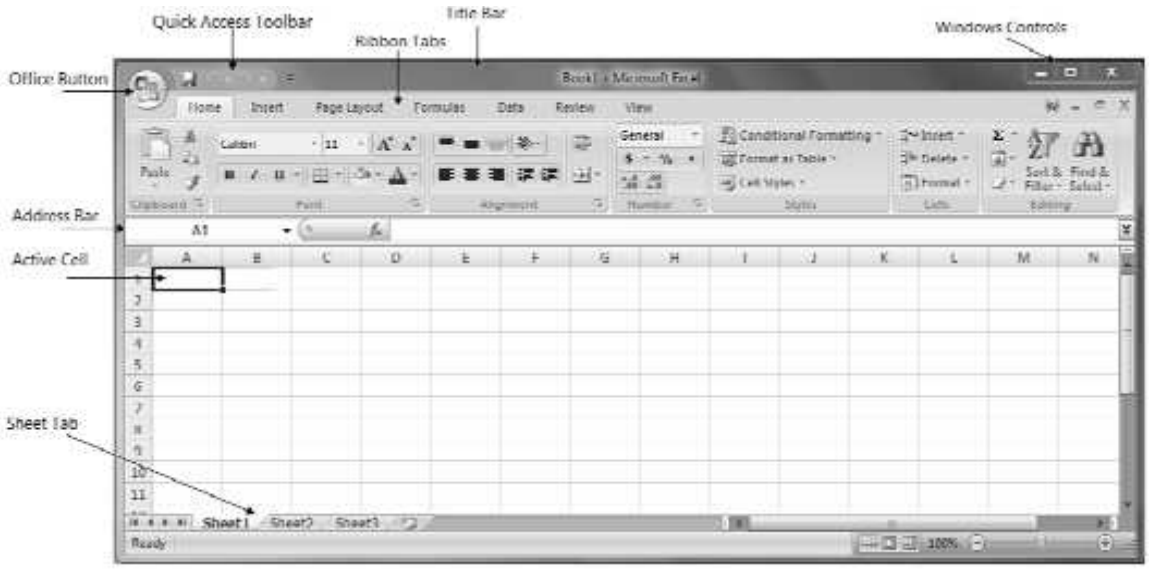
- Data can also be presented graphically, which helps in a variety of data analysis.
- It includes a number of database functions. These functions allow us to work with data in a tabular form.
- Format and organizing your data by sorting it.
- Name ranges of data and names in formulas and navigation for automatic updating.
- Generate charts and graphs illustrating your data
- Automate and customize procedures by using macros.

➢ Starting with Spreadsheet

1. Click the **Start Button**
2. Select **All Programs**
3. Go to **Microsoft Office**
4. Select **Microsoft Office Excel**

➢ Structure of Spreadsheet Window

- **Title bar:** It displays the name of the currently active workbook.
- **Rows and Columns**: Most of the screen is covered with a grid of **rows** and **columns**. The rows are labelled with numbers and the columns are labelled with letters. This grid is your spreadsheet work area, where you will enter your data and the see the results of your calculations.



- **Cell**: The intersection of any column and row is called a **cell**. Cells have addresses. The cell address is its column letter followed by its row number.
- **Active Cell:** The active cell is the cell that Spreadsheet is "looking" at. In a new worksheet, the active cell is cell A1. Data is always entered into the active cell. The active cell displays a highlighted border around the cell.
- **Address bar:** It gives the address of the currently active cell.
- **Formula bar:** It allows is used for examining and editing the contents of cells.
- **Sheet tab:** It gives us information about the currently active sheet.

➢ Creating a Workbook

Spreadsheet creates documents as **workbooks**. Each workbook can contain many **spreadsheets**. Each spreadsheet has a tab on the bottom marked Sheet1, Sheet2, etc. These sheets can be added, deleted, rearranged, and the tabs renamed.

To create a new workbook, you can open a blank workbook. The steps involved in creating a new document are

1. Click the **Office Button**
2. Click the **New** option and then select **Blank Workbook.** New

Know This!	• The file in Spreadsheet will have the extension ".ods", ".xlsx", ".sdc" • By default, the file will be stored in a folder named Documents

➢ Moving the Active Cell

- **Using the Mouse:** To select a new active cell using the mouse, click any cell. The cell is highlighted and the name of the cell is shown in the Cell Address box.
- **Using the Keyboard:** To move the active cell one cell at a time press the arrow keys: ↑ or ↑ or → or ←

➢ Data Selection

Use the mouse or keyboard shortcuts to select cells, rows, and columns of data:

- Single clicking on the column label will select the whole column.
- Single clicking on the row label will select the whole row.
- Clicking and dragging across several row or column labels will select several rows or columns, respectively.

 Hint	• Non-adjacent cells can be selected by holding down the Ctrl key and using the mouse to single click the desired cells. • Clicking on the gray box where the row labels and column labels intersect (top left a corner of the worksheet) will select the whole worksheet.

➢ Data Entry

To enter data into a worksheet:

- Select a cell.
- Type the data and press either **Enter** or **Tab** to move to the next cell.

To edit data that is already entered, you can do one of the following:

- Select the cell and retype the data (the previous data will be replaced).
- Double click or press **F2**, the cursor appears at the end of the data in the cell, and then modify it.

 Hint	• To enter data on a new line within a cell, enter a line break by pressing **Alt+Enter**.

➢ Cut, Copy, and Paste

The cut, copy, and paste editing tools are available in Spreadsheet, just as they are available in Word Processor. You can access them either through the Edit drop menu, using the Standard Toolbar buttons, or by using their associated keyboard shortcuts.

➢ Filling Data

The Auto Fill feature allows you to quickly fill in commonly used series of data, such as repetitive or sequential data.

It is used to fill in chronological dates or numbers, or repeated text. For example: If a cell contains the word "January", can quickly fill in other cells with "February", "March", etc.

To use the Auto Fill feature:

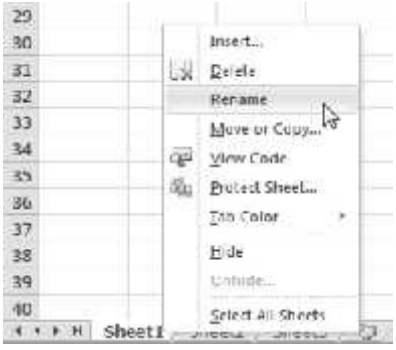
1. In several cells, type the first few elements of the series. For example Type 1, 3, and 5 into three different cells.
2. Select the cells.
3. Select the handle at the bottom right corner of the cell with the left mouse and drag it down across as many rows as you want to fill. You can also auto-fill across columns by dragging right.
4. Release the mouse button.

➢ Worksheet Modification

♦ Insert a Worksheet

By default, Spreadsheet provides 3 worksheets Sheet1, Sheet2, and Sheet3.To insert a new worksheet in front of an existing worksheet do the following steps

1. Select the worksheet, then on the **Home tab** Cells group.
2. Click **Insert** and select **Insert Sheet**.



♦ Rename a Worksheet

To give a worksheet a more specific name, execute the following steps.

1 Right-click on the sheet tab of Sheet1.

2 Choose **Rename**. Then type a name and Press **Enter.**

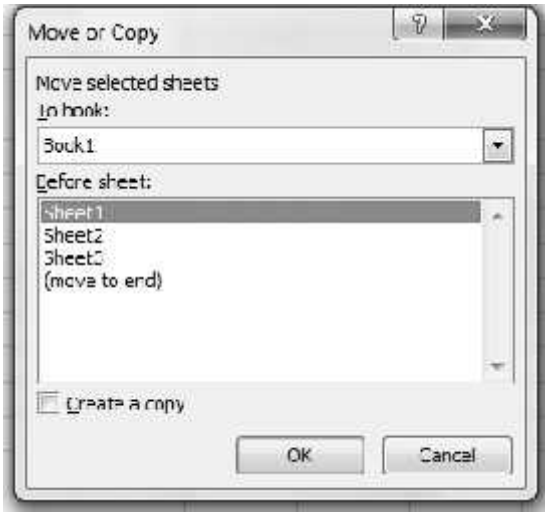
- **Delete a Worksheet**

To delete a worksheet, right click on a sheet tab and choose Delete.

- **Moving or Copying a Worksheet**

Right-click on the worksheet tab and select Move or Copy from the pop-up menu. A dialog box will open:

- The **To Book** field allows you to move or copy the current worksheet to another workbook.
- The **Before Sheet** field allows you to specify the new position of the worksheet.
- The **Create a Copy** check box lets you specify whether the worksheet should be moved or copied. If it is selected, the workbook will be copied otherwise it will be moved.



➢ Inserting Rows and Columns

When you insert a row, the new row will be positioned *above* the row containing the active cell.

1. Select a cell in the row above which you want to insert a new row.
2. On the **Home** ribbon, find the **Cells** group and click **Insert** followed by **Insert Sheet Rows.**
3. A new row will be inserted above the current row.

When you insert a column, the new column will be positioned *to the left* of the column containing the active cell.

1. Select a cell in the column to the left of which you want to insert a new column.
2. On the **Home** ribbon, find the **Cells** group and click **Insert** followed by **Insert Sheet Columns.**
3. A new column will be inserted to the left of the current column.

➢ Deleting Rows and Columns

To delete a row, do as follows:

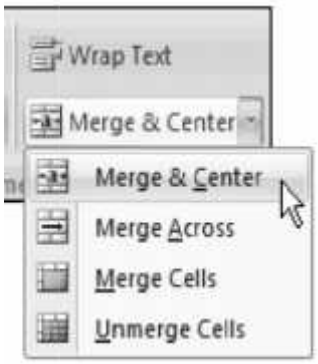
1. Select a cell in the row that you want to delete.
2. On the **Home** ribbon, find the **Cells** group and click **Delete** followed by **Delete Sheet Rows**.
3. The row containing the active cell will be deleted. All the rows below it will move up by one.

To delete a column, do as follows:

1. Select a cell in the column that you want to delete.
2. On the Home ribbon, find the Cells group and click **Delete** followed by **Delete Sheet Columns**.
3. The column containing the active cell will be deleted. All the columns on its right will move left by one

Note	You can also right-click on the active cell and use the popup menu to insert or delete a row/column.

➢ Wrapping Text within a Cell



1. Select the cell or range of cells you wish to format
2. Locate the **Alignment** area of the **Home** ribbon
3. Click on the button labeled **Wrap Text**

➢ Merge Cells

Merging joins the selected cells into one larger cell. To merge several cells

1. Select the cell or range of cells you wish to format
2. Locate the **Alignment** area of the **Home** ribbon
3. Click on the down-facing arrow located next to the button labeled **Merge & Centre**
4. From the list that appears, select the formatting you wish to apply (example **Merge and Centre**)

➢ Calculation Operators

Operators specify the type of calculation that you want to perform on the elements of a formula. There are four different types of calculation operators: arithmetic, comparison, text concatenation, and reference.

♦ Arithmetic operators

To perform basic mathematical operations such as addition, subtraction, or multiplication, combine numbers and produce numeric results, use the following arithmetic operators.

Arithmetic operator	Meaning	Example
+ (plus sign)	Addition	=3+3
– (minus sign)	Subtraction	=3–1
– (minus sign)	Negation	–1
* (asterisk)	Multiplication	=3*3
/ (forward slash)	Division	=3/3
% (percent sign)	Percent	20%
^ (caret)	Exponentiation	3^2

You can perform all above arithmetic operation on the cell with a cell reference. For Example: if the cells A1 and B1 contain base and height of a triangle, then the formula to calculate area is `=(A1*B1)/2`

➢ Getting Help

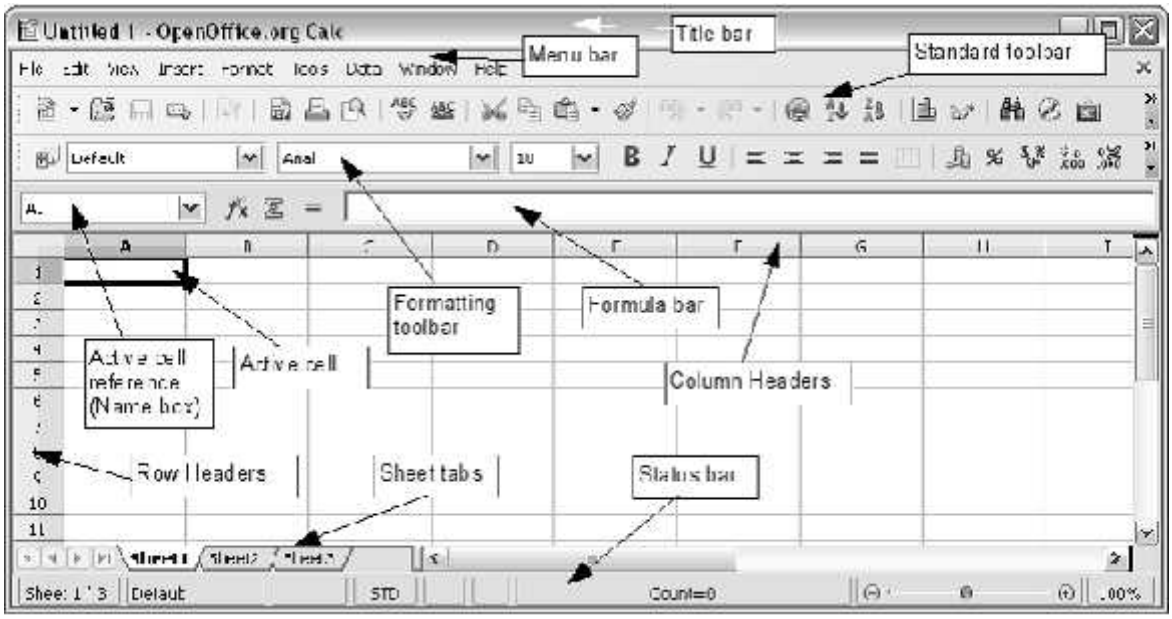
To use Spreadsheet help, click the Help button  in the upper right corner of the window or press the **F1** key on your keyboard.

➢ Openoffice.org Calc

Calc is the spreadsheet component of OpenOffice.org (OOo). You can enter data (usually numerical) in a spreadsheet and then manipulate this data to produce certain results. Alternatively, you can enter data and then use Calc in a 'What if...' manner by changing some of the data and observing the results without having to retype the entire spreadsheet or sheet.

Other features provided by Calc include:

- Functions, which can be used to create formulas to perform complex calculations on data
- Database functions, to arrange, store, and filter data
- Dynamic charts; two new types of charts−Bubble Charts and Filled Net Charts
- Macros, for recording and executing repetitive tasks; scripting languages supported include OpenOffice.org Basic, Python, and JavaScript
- Ability to open, edit, and save Microsoft Excel spreadsheets
- Import and export of spreadsheets in multiple formats, including HTML, CSV, PDF, and PostScript



♦ **Title bar**

This is located at the top, shows the name of the current spreadsheet. When the spreadsheet is newly created, its name is Untitled X, where X is a number.

♦ **Menu bar**

Under the Title bar is the Menu bar. When you choose one of the menus, a submenu appears with other options.

- **File** contains commands that apply to the entire document such as Open, Save, Wizards, Export as PDF, and Digital Signatures.
- **Edit** contains commands for editing the document such as Undo, Changes, Compare Document, and Find and Replace.
- **View** contains commands for modifying how the Calc user interface looks such as Toolbars, Full Screen, and Zoom.
- **Insert** contains commands for inserting elements such as cells, rows, columns, sheets, and pictures into a spreadsheet.
- **Format** contains commands for modifying the layout of a spreadsheet such as Styles and Formatting, Paragraph, and Merge Cells.
- **Tools** contain functions such as Spelling, Share Document, Cell Contents, Gallery, and Macros.
- **Data** contains commands for manipulating data in your spreadsheet such as Define Range, Sort, Filter, and Data Pilot.

♦ **Toolbars**

Three toolbars are located under the Menu bar by default, the Standard toolbar, the Formatting toolbar, and the Formula Bar. On the left-hand side of the Formula Bar is a small text box, called the Name Box, with a letter and number combination in it.

♦ **Status bar**

The Calc status bar provides information about the spreadsheet and convenient ways to quickly change some of its features.

Chapter 7: Formatting in Spreadsheet

- Formatting cells
- Cell alignment
- Number format
- Functions library

Learning Objectives:

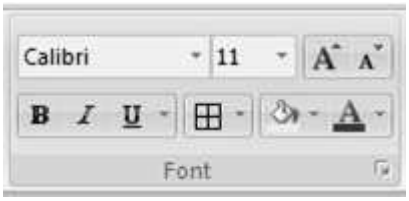
After you have studied this lesson you will be able to:

- Read data given in a spreadsheet.
- Enter data and do basic calculations using a spreadsheet.
- Enter formula to compute the average in a spreadsheet.

➢ Formatting Cell

The contents of a selected cell (either numbers or text) can be formatted in many ways. By default, all cells are in General format where the text is left-aligned (contents of the cell are flush with the left border of the cell) and numbers are right-aligned.

♦ Font



To change the font styles, follow the given steps

1. Select the cell or range of cells.
2. On the Home, find the **Font** group and Select the Font, Font style, size, borders, fill color and font color.
3. Click on the **OK** button.

➢ Cell Alignment

You can align the cell data with horizontal alignment, vertical alignment, and orientation option.

♦ Horizontal Alignment

1. Select the cell or range of cells you wish to format.
2. Locate the Alignment area of the Home ribbon.
3. Click on one of the following buttons to apply horizontal text alignment.

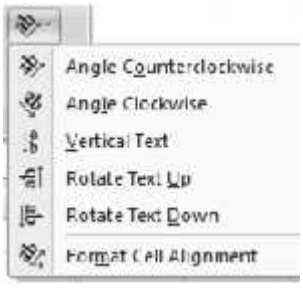
To Align your text to	Click on
Left of the Cell	
Middle of the Cell	
Right of the Cell	

♦ Vertical Alignment

1. Select the cell or range of cells you wish to format
2. Locate the Alignment area of the Home ribbon
3. Click on one of the following buttons to apply Vertical text alignment

To Align your text to	Click on
Top of the Cell	
Middle of the Cell	
Bottom of the Cell	

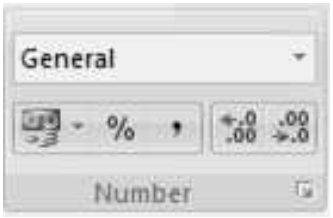
♦ **Orientation**



Rotate the text to a diagonal angle or vertical orientation

1. Select the cell or range of cells you wish to format
2. Locate the **Alignment** area of the **Home** ribbon
3. Click **Orientation** , and then select the rotation option that you want.

➢ Number Format



To clarify your worksheet further, you can specify the format in which selected numbers are displayed. To do this, select the cells containing the numbers in question, then from the **Number** group on the **Home** tab, click the drop-down list.

Select any numbering style, or for more options, select the **More Number Formats** option. In the dialog box that appears, you will see a list of categories of numbers and for each category, there will be a second list containing possible formats. You can then choose a format for your selected data.

In addition, there are buttons in the Number group which will quickly format numbers as currency, percentages, or fixed numbers of decimals.

♦ **Advanced formatting options**

Excel permits number to be formatted in many different ways. Without changing the value of the number in a cell, number format allows data to be represented so that they can be used in many different kinds of projects.

Type	Looks Like	Option
General	0.55	None
Number	0.55	Number of decimal places were shown, negative number format
Currency	$0.55	Number of decimal places were shown, currency symbol, negative number format
Accounting	$0.55(lines up decimal points in a column of data)	Number of decimal places were shown, currency symbol
Percentage	55%	Number of decimal places shown
Fraction	1/5	Number of digits in denominator, type of fraction
Text	0.55	Number is displayed exactly as entered
Date	1/0/00	Several Date formats available
Time	1:20:00 PM	Several Time formats available
Special	Varies	Zip code, Phone number, Social Security Number

➢ Background color

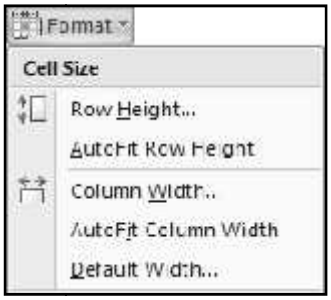
Background colors (called **Fill Color in Excel**) can provide additional contrast in your worksheets whether you use them alone or to complement existing cell borders. To apply Fill color

1. Select the cell or range of cells you wish to format
2. Locate the **Font** area of the **Home** ribbon
3. Click on the down-facing arrow of the **Fill Color** Button
4. From the options that appear, select the color you wish to apply to your background.

➢ Formatting rows and columns

Any of the cell formatting options above can easily be applied to all the cells contained in one or more rows or columns. Simply select the rows or columns by clicking on the row or column labels, and then click on the formatting icons that you want to apply.

You may also want to adjust the width of a column:



1. To manually adjust the width, click and drag the boundary  between two column headings.
2. To automatically adjust the width, select the required columns, and then in the Cell group on the Home ribbon, select **Format**, **Cell Size**, **Autofit Column Width**.

To specify an exact column width, select the columns, and then in the Cell group on the Home ribbon, select **Format**, **Cell Size**, **Column Width**, and type the value you want.

To adjust the height of a row:

1. To manually adjust the height, click and drag the boundary between two-row labels.
2. To automatically adjust the height, select the required rows, and then in the Cell group on the Home ribbon, select **Format**, **Cell Size**, **Autofit Row Height**.
3. To set a row or rows to a specific height, select the rows, and then in the Cell group on the Home ribbon, select **Format**, **Cell Size**, **Row Height**, and type the value that you want.

➢ Functions library

A Function is a pre-defined formula for performing a particular task. Excel provides many such functions to make work easier. Excel provides a wide range of built-in functions that can be included in your formulas to avoid detailed calculations.

♦ Basic functions

Some of the most commonly used functions include:

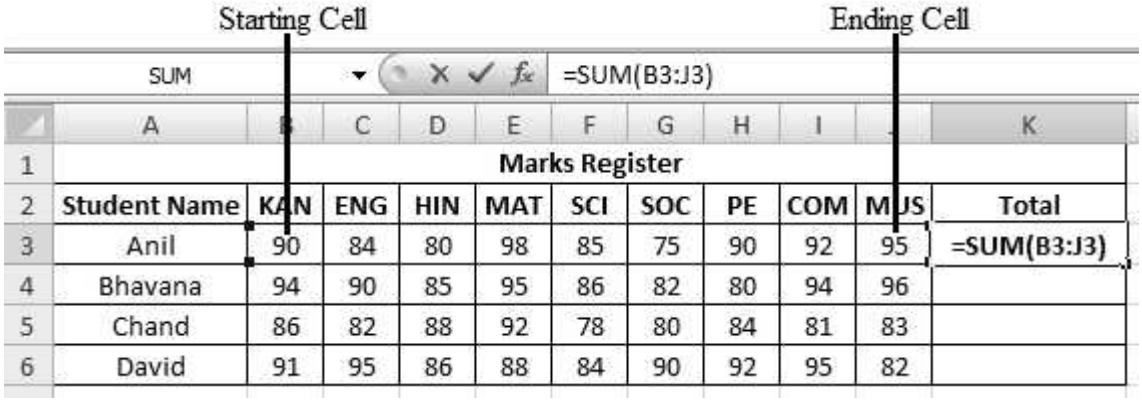
Functions Name	Description
SUM( )	To calculate the sum(total) of a set of numbers
AVERAGE( )	To calculate the average of a set of numbers
MAX( )	To calculate the maximum value within a set of numbers
MIN( )	To calculate the minimum value within a set of numbers
COUNT( )	To count the number of cells selected

- **SUM( ):** The SUM function adds all the numbers that you specify as arguments. Each argument can be a range.

  The general form of Sum function is =SUM (Starting Cell: Ending Cell)

  Use this function to add the numbers in selected cells

  1. Type '=' sign.
  2. Type SUM and open the left bracket '**(**'.
  3. Select the range of cells for which you want to add.
  4. Close the right bracket '**)**'.
  5. Press **Enter** key to get the result.



	A	B	C	D	E	F	G	H	I	J	K
1	Marks Register										
2	Student Name	KAN	ENG	HIN	MAT	SCI	SOC	PE	COM	MUS	Total
3	Anil	90	84	80	98	85	75	90	92	95	=SUM(B3:J3)
4	Bhavana	94	90	85	95	86	82	80	94	96	
5	Chand	86	82	88	92	78	80	84	81	83	
6	David	91	95	86	88	84	90	92	95	82	

- **AUTOSUM:** Σ AutoSum The AutoSum is a button which is present on the toolbar. Pressing this button will automatically calculate the sum of selected numbers.

Click on AutoSum button on editing tab to calculate the total of the set of numbers. This button gives the sum of values of selected cells without typing the formula.

	A	B	C	D	E	F	G	H	I	J	K
1	Marks Register										
2	Student Name	KAN	ENG	HIN	MAT	SCI	SOC	PE	COM	MUS	Total
3	Anil	90	84	80	98	85	75	90	92	95	789

- **AVERAGE( ):** This function gives you the average of series of numbers.

  The general form of this function is =AVERAGE (Starting Cell: Ending Cell)

	A	B	C	D	E	F	G	H	I	J	K	L
1	Marks Register											
2	Student Name	KAN	ENG	HIN	MAT	SCI	SOC	PE	COM	MUS	Total	Average
3	Anil	90	84	80	98	85	75	90	92	95	=AVERAGE(B3:J3)	
4	Bhavana	94	90	85	95	86	82	80	94	96	**802**	
5	Chand	86	82	88	92	78	80	84	81	83	**754**	
6	David	91	95	86	88	84	90	92	95	82	**803**	

Type the formula as shown in above picture and press enter key. You will get the average of series of numbers.

- **COUNT( ):** This function counts the number of selected cells that contain data.

  The general form of this function is =COUNT (Starting Cell: Ending Cell)

- **MAX( ):** This function is used for finding the largest value from a given series of numbers.

  The general form of this function is =MAX (Starting Cell: Ending Cell)

- **MIN( ):** This function gives the smallest value from a set of values.

  The general form of this function is =MIN (Starting Cell: Ending Cell)

➢ Spreadsheet Navigation

As you enter and edit data, you will need to move through the worksheet, which can be done using your mouse or keyboard shortcuts. The following is a summary of available spreadsheet navigation techniques:

Action	Result
Single Click	Cell Makes the cell active
Enter	Moves the active cell one cell down
Shift+Enter	Moves the active cell one cell up
Tab	Moves the active cell one cell to the right
Shift+Tab	Moves the active cell one cell to the left
↑	Moves the active cell up one row

↓	Moves the active cell down one row
←	Moves the active cell left one column
→	Moves the active cell right one column
Home	Moves the active cell to column A of the current row
Ctrl+Home	Moves the active cell to A1
Ctrl+End	Moves the active cell to the last cell in the spreadsheet with data
Page Up or Page Down	Moves the active cell up or down by one screen full of rows
Ctrl+↑	Moves the active cell to the first row with data in the current column
Ctrl+↓	Moves the active cell to the last row with data in the current column
Ctrl+ ←	Moves the active cell to the first column with data in the current row
Ctrl+→	Moves the active cell to the last column with data in the current row
Ctrl+Page Down	Moves to the next worksheet
Ctrl+	Page Up Moves to the previous worksheet
F5	Opens the Go To dialog box

Teachers' Corner

- Discuss classification in general. Ask students what we mean by classification and why we classify things. For example, why do we classify certain things as living, others as non-living? Establish that classification makes things easy to find, identify, and study.
- While discussing Analog and Digital computers, ask students what are the different types of clocks they've seen. Ask them to list the differences between Analog and Digital clocks. Use their answers to establish the concept of Analog and Digital computers.
- Demonstrate how to use of removable storage devices.
- While discussing word processor ask students to observe each other's handwriting and note the similarities and differences. Tell them that they can use the computer to write in different styles and colors. Inform them that the handwriting on a computer is called 'font' and they can also make it bigger or smaller. Ask them to open a particular textbook and note the different styles of fonts and whether they are bold, underlined and so on.
- Demonstrate text formatting using a word processor. Encourage students to write their own content for practice, like poems, essays, etc.
- Open a spreadsheet and demonstrate spreadsheet basics, formulas, and functions. Encourage students to practice with the mathematical formulas that they are already familiar with.

ಕರ್ನಾಟಕ ಸರ್ಕಾರ ಸಮಾಜ ಕಲ್ಯಾಣ ಇಲಾಖೆ

ಸಮಾಜ ಕಲ್ಯಾಣ ಇಲಾಖಾವತಿಯಿಂದ ಅನುಷ್ಠಾನ ಮಾಡುತ್ತಿರುವ ಪರಿಶಿಷ್ಟ ಜಾತಿ ಮತ್ತು ಪರಿಶಿಷ್ಟ ವರ್ಗದ ಕಲ್ಯಾಣ ಕಾರ್ಯಕ್ರಮಗಳ ವಿವರಗಳು

1. ಪ.ಜಾತಿ ಉಪಯೋಜನೆ, ಪ.ಪಂಗಡ ಉಪ ಯೋಜನೆ ಕಾರ್ಯಕ್ರಮಗಳು:

ಪ.ಜಾತಿ ಮತ್ತು ಪ.ವರ್ಗದ ಬಡತನ ರೇಖೆಗಿಂತ ಕೆಳಗಿರುವ ಬಡ ಕುಟುಂಬಗಳನ್ನು ಗುರುತಿಸಿ,ಇವರನ್ನು ಬಡತನ ರೇಖೆಗಿಂತ ಮೇಲೆ ತರಲು ಹಲವಾರು ಆರ್ಥಿಕ ಅಭಿವೃದ್ಧಿ ಚಟುವಟಿಕೆಗಳನ್ನು ಕೈಗೊಂಡು ನಿರಂತರ ಆದಾಯ ಬರುವಂತೆ ವ್ಯವಸ್ಥೆ ಮಾಡಲಾಗುವುದು. ಅದರಂತೆ ಈ ಆರ್ಥಿಕ ಅಭಿವೃದ್ಧಿ ಕಾರ್ಯಕ್ರಮಗಳನ್ನು ಕೃಷಿ, ತೋಟಗಾರಿಕೆ, ರೇಷ್ಮೆ, ಅರಣ್ಯ, ಭೂ ಸಾರಸಂರಕ್ಷಣೆ, ಪಶು ಸಂಗೋಪನೆ, ಮೀನುಗಾರಿಕೆ, ಸಣ್ಣ ಕೈಗಾರಿಕೆ ಮುಂತಾದ ಇಲಾಖೆಗಳ ಮೂಲಕ ಅನುಷ್ಠಾನಗೊಳಿಸಿ ಫಲಾನುಭವಿಗಳಿಗೆ ಸವಲತ್ತುಗಳನ್ನು ವಿತರಿಸಲಾಗುವುದು.

2. ಪ.ಜಾತಿ / ವರ್ಗದ ಕಾಲೋನಿಗಳಿಗೆ ಅವಶ್ಯಕತೆ ಇರುವ ಮೂಲಭೂತ ಸೌಕರ್ಯಗಳಿಂದ ಕಾಂಕ್ರೀಟ್ ರಸ್ತೆ, ಚರಂಡಿ ಕುಡಿಯುವ ನೀರಿನ ಸೌಲಭ್ಯ ಸೈಯಕ್ತಿಕ ಶೌಚಾಲಯದ ವ್ಯವಸ್ಥೆಯನ್ನು ಕಲ್ಪಿಸಲಾಗುವುದು ಹಾಗೂ ಭವನಗಳನ್ನು ನಿರ್ಮಾಣ ಮಾಡಲಾಗುವುದು.

3. ಡಾ॥ ಅಂಬೇಡ್ಕರ್ ಫೌಂಡೇಷನ್, ಸಾಮಾಜಿಕ ನ್ಯಾಯ ಮತ್ತು ಸಬಲೀಕರಣ ಮಂತ್ರಾಲಯ, ಭಾರತ ಸರ್ಕಾರ, ಇವರಿಂದ ಹಾಗು ಡಾ॥ಅಂಬೇಡ್ಕರ್ ಫೌಂಡೇಷನ್ ಯೋಜನೆಯಡಿ ಈ ಕೆಳಕಂಡ ಯೋಜನೆಗಳಿಗೆ ಸಹಾಯಧನ ನೀಡಲಾಗುತ್ತದೆ.

ಡಾ॥ ಮೆಡಿಕಲ್ ಬಿಡ್ ಯೋಜನೆಯಡಿ ಸಹಾಯಧನ: ಸದರಿ ಯೋಜನೆಯಡಿ ಕಿಡ್ನಿ, ಹೃದಯ, ಲಿವರ್, ಕ್ಯಾನ್ಸರ್, ಮೆದುಳು ಸಂಬಂಧಿ ತೊಂದರೆಗಳಿಂದ ಹಾಗೂ ಮುಂತಾದ ತೀವ್ರ ಸ್ವರೂಪದ ಕಾಯಿಲೆಗಳಿಂದ ಬಳಲುತ್ತಿದ್ದು, ತಪ್ಪ ಚಿಕಿತ್ಸೆ ಮಾಡಿಸಿಕೊಳ್ಳುವ ಅವಶ್ಯಕತೆ ಇರುವ ವಾರ್ಷಿಕ ಆದಾಯದ ಮಿತಿ ರೂ.50,000/- ಒಳಗಿರುವ ಪ.ಜಾತಿ ಅಭ್ಯರ್ಥಿಗಳಿಗೆ ರೂ.1.00 ಲಕ್ಷದಿಂದ ರೂ.3.50 ಲಕ್ಷಗಳವರೆಗೆ ಸಹಾಯಧನ ನೀಡಲಾಗುವುದು

4. ಜಾತಿ ನಿಂಧೃತ್ವ ಪ್ರಮಾಣ ಪತ್ರಗಳು:

ಪ.ಜಾತಿ/ವರ್ಗದ ಅಭ್ಯರ್ಥಿಗಳು ಯಾವುದಾದರೂ ಸರ್ಕಾರಿ/ಅರೆ ಸರ್ಕಾರಿ ಹುದ್ದೆಗಳಿಗೆ ನೇಮಕಗೊಂಡಲ್ಲಿ ನೇಮಕಾತಿ ಪ್ರಾಧಿಕಾರದಿಂದ ಅಭ್ಯರ್ಥಿಯ ಜಾತಿ ಬಗ್ಗೆ ನಿಂಧುತ್ವ ಕೋರಿದಲ್ಲಿ ಇಲಾಖಾವತಿಯಿಂದ ಕೂಲಂಕುಷವಾಗಿ ಪರಿಶೀಲಿಸಿ ನಿಂಧುತ್ವ ಪತ್ರ ನೀಡಲಾಗುವುದು.

5. ಅಸ್ಪೃಶ್ಯತಾ ನಿವಾರಣಾ ಕಾರ್ಯಕ್ರಮ:

- ಅಸ್ಪೃಶ್ಯತೆ ನಿವಾರಣೆ ಮಾಡುವ ನಿಟ್ಟಿನಲ್ಲಿ ಅಂತರಜಾತಿ ವಿವಾಹವಾದ ದಂಪತಿಗಳಿಗೆ ಇಲಾಖಾ ವತಿಯಿಂದ ರೂ.2,00,000/- ದಿಂದ ರೂ.3,00,000/- ಗಳ ಪ್ರೋತ್ಸಾಹಧನವನ್ನು ನೀಡಲಾಗುವುದು. ಆದಾಯ ಮಿತಿ ರೂ.50,000-00 ರೂ.ಗಳ ಮಿತಿಯಲ್ಲಿರಬೇಕಾಗಿರುತ್ತೆ. ದಂಪತಿಗಳಲ್ಲಿ ಒಬ್ಬರು ಪ.ಜಾತಿಯವರಾಗಿದ್ದೇಕು ಹಾಗೂ ಇನ್ನೊಬ್ಬರು ಹಿಂದೂ ಜಾತಿಯವರಾಗಿರಬೇಕು.
- ಸಾಮೂಹಿಕ ವಿವಾಹ ಕಾರ್ಯಕ್ರಮದಲ್ಲಿ ಸರಳ ವಿವಾಹವಾಗುವ ಪ.ಜಾತಿ ಮತ್ತು ಪ.ಪಂಗಡಕ್ಕೆ ಸೇರಿದ ದಂಪತಿಗಳಿಗೆ ಸರಳ ವಿವಾಹ ಯೋಜನೆಯಡಿ ರೂ.50,000/- ಆರ್ಥಿಕ ನೆರವು ನೀಡಲಾಗುವುದು. ಈ ಯೋಜನೆಯಡಿ ಧನ ಸಹಾಯ ಪಡೆಯಲು ವಧು ಮತ್ತು ವರರ ಒಟ್ಟು ವಾರ್ಷಿಕ ಆದಾಯ ರೂ.2,00,000/- ಗಳ ಮಿತಿಯಲ್ಲಿರಬೇಕು.

6. ದೌರ್ಜನ್ಯ ಪ್ರಕರಣಗಳು

- ದೌರ್ಜನ್ಯ ನಿಯಂತ್ರಣ ಕಾಯ್ದೆ ಅಡಿಯಲ್ಲಿ ಪ.ಜಾತಿ ಮತ್ತು ಪ.ವರ್ಗದವರಿಗೆ ರಕ್ಷಣೆ ನೀಡಲಾಗುವುದು.
- ದೌರ್ಜನ್ಯ ಪ್ರಕರಣಗಳಲ್ಲಿ ಸೊಂದ ಪ.ಜಾತಿ/ಪ.ವರ್ಗದ ಸಂತ್ರಸ್ಥರಿಗೆ ರೂ.90,000-00 ರಿಂದ 7.50 ಲಕ್ಷದವರೆಗೂ ಪರಿಹಾರ ಧನವನ್ನು ವಿವಿಧ ಹಂತಗಳಲ್ಲಿ ಮಂಜೂರು ಮಾಡುತ್ತಿದ್ದು, ಹಾಗೂ ದೌರ್ಜನ್ಯದಲ್ಲಿ ಮರಣಹೊಂದಿದ ಪ.ಜಾತಿ/ಪ.ವರ್ಗದ ಅವಲಂಭಿತರಿಗೆ ಸರ್ಕಾರಿ ನೌಕರಿ ಹಾಗೂ ಮಾಸಿಕ ಪಿಂಚಣಿ ಹಾಗೂ ಮಕ್ಕಳಿಗೆ ವಸತಿ ಶಾಲೆಗಳಲ್ಲಿ ಉನ್ನತ ವಿದ್ಯಾಭ್ಯಾಸ ಕಲ್ಪಿಸಲಾಗುವುದು.
- ದೌರ್ಜನ್ಯದಲ್ಲಿ ಸೊಂದ ಪ.ಜಾತಿ/ಪ.ವರ್ಗದ ಕುಟುಂಬಗಳಿಗೆ ಆರ್ಥಿಕ ಸಾಲ ಸೌಲಭ್ಯ ಹಾಗೂ ಕಾಲೋನಿಗೆ ಮೂಲಭೂತ ಸೌಕರ್ಯ ಕಲ್ಪಿಸಲಾಗುವುದು.
- ದೌರ್ಜನ್ಯ ಪ್ರಕರಣಗಳಲ್ಲಿ ನ್ಯಾಯಾಲಯ ವಿಚಾರಣೆಗಾಗಿ ಬಂದ ಸಂತ್ರಸ್ಥರಿಗೆ ಮತ್ತು ಸಾಕ್ಷಿದಾರರಿಗೆ TA/DA ನೀಡಲಾಗುವುದು.
- ದೌರ್ಜನ್ಯ ತಡೆ ಅಧಿನಿಯಮ 1989 ರಂತೆ ಮತ್ತು ಅಸ್ಪೃಶ್ಯತಾ ನಿವಾರಣೆಗಳ ಬಗ್ಗೆ ಸಾರ್ವಜನಿಕರಲ್ಲಿ ಅರಿವು ಮೂಡಿಸಲು ಗ್ರಾಮ, ತಾಲ್ಲೂಕು ಮತ್ತು ಜಿಲ್ಲಾ ಮಟ್ಟದಲ್ಲಿ ಕಾರ್ಯಾಗಾರ ಹಾಗೂ ಕಮ್ಮಟಗಳನ್ನು ನಡೆಸಲಾಗುವುದು.

ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಸಮಾಜ ಕಲ್ಯಾಣ ಇಲಾಖೆ

ಶ್ರೀ ಸಿದ್ದರಾಮಯ್ಯ
ಘನ್ನ ಮುಖ್ಯಮಂತ್ರಿಗಳು

ಶ್ರೀ ಹೆಚ್. ಆಂಜನೇಯ
ಮಾನ್ಯ ಸಮಾಜ ಕಲ್ಯಾಣ ಮತ್ತು ಹಿಂದುಳಿದ ವರ್ಗಗಳ ಕಲ್ಯಾಣ ಸಚಿವರು ಹಾಗೂ ಅಧ್ಯಕ್ಷರು, ಕ.ಪ.ಪಿ.ಸಂ.ಸಂಘ

ಪ್ರತಿಭೆಗೆ ಪುರಸ್ಕಾರ

ಸಾಮಾಜಿಕವಾಗಿ, ಶೈಕ್ಷಣಿಕವಾಗಿ, ಆರ್ಥಿಕವಾಗಿ ಹಿಂದುಳಿದ ಗ್ರಾಮೀಣ ಪ್ರದೇಶದ ಪರಿಶಿಷ್ಟ ಜಾತಿ, ಪರಿಶಿಷ್ಟ ವರ್ಗ ಮತ್ತು ಹಿಂದುಳಿದ ವರ್ಗಗಳ ಪ್ರತಿಭಾವಂತ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಉತ್ತಮ ಗುಣಮಟ್ಟದ ಶಿಕ್ಷಣ ನೀಡುವ ಉದ್ದೇಶದಿಂದ ಕರ್ನಾಟಕ ರಾಜ್ಯ ಸರ್ಕಾರದ ವತಿಯಿಂದ 359 ಮೊರಾರ್ಜಿ ದೇಸಾಯಿ, 115 ಕಿತ್ತೂರು ರಾಣಿ ಚೆನ್ನಮ್ಮ ಮತ್ತು 05 ಅಟಲ್ ಬಿಹಾರಿ ವಾಜಪೇಯಿ ವಸತಿ ಶಾಲೆಗಳು ಸೇರಿದಂತೆ ಒಟ್ಟು 479 ವಸತಿ ಶಾಲೆಗಳನ್ನು ಸ್ಥಾಪಿಸಲಾಗಿದೆ. ಈ ವಸತಿ ಶಾಲೆಗಳಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಉಚಿತವಾಗಿ ಊಟ, ವಸತಿ ಹಾಗೂ ಗುಣ ಮಟ್ಟದ ಶಿಕ್ಷಣವನ್ನು ನೀಡುವ ಕಾರ್ಯಚಟುವಟಿಕೆಗಳನ್ನು ನಿರ್ವಹಿಸಲಾಗುವುದು.

ಶ್ರೀ ಗಂಗಾರಾಮ್ ಬಡೇರಿಯ್, ಭಾ.ಆ.ಸೇ.
ಕಾರ್ಯದರ್ಶಿ, ಸಮಾಜ ಕಲ್ಯಾಣ ಇಲಾಖೆ ಹಾಗೂ
ಉಪಾಧ್ಯಕ್ಷರು, ಕ.ಪ.ಪಿ.ಸಂ.ಸಂಘ, ಬೆಂಗಳೂರು

ಶ್ರೀ ಎಂ.ಆರ್. ಹಿರೇಮಠ್, ಕ.ಆ.ಸೇ.
ಕಾರ್ಯನಿರ್ವಾಹಕ ನಿರ್ದೇಶಕರು
ಕ.ಪ.ಪಿ.ಸಂ.ಸಂಘ, ಬೆಂಗಳೂರು