



A.S.D GOVT.DEGREE COLLEGE FOR WOMEN (A)

Jagannaickpur, Kakinada

DEPARTMENT OF COMPUTER SCIENCE Activity Register 2018-2019

Date	11/06/2018 to 15/06/2018
Conducted through (DRC/JKC/ELF/NCC/NSS/Department etc.,)	Department of Computers
Nature of Activity (seminar/workshop/exten Lecture etc)	BRIDGE COURSE - I B.Com (CA).
Title of the Activity	COMPUTER FUNDAMENTALS
Name of the Department/ Committee	Department of Computers
Details of Resourc persons (Name, Designation etc.,)	G.Satya Suneetha M.Tech.,(Ph.D). Lecturer in Computer Applications
No. of students participated	25
Brief Report on the activity	To get them acquainted with the subject, a five days programme is being held. (separate sheet enclosed)
Name of the Lecturers who planned & conducted the activity	G.Satya Suneetha M.Tech.,(Ph.D). Lecturer in Computer Applications
Signature of the Department In-charge/ Convener of the Committee	 Signature of the HOD DEPT OF COMPUTER SCIENCE A.S.D GOVT. DEGREE COLLEGE (A) AUTONOMOUS KAKINADA
Signature of the Principal	 PRINCIPAL A.S.D.GOV.T.DEGREE COLLEGE (A) AUTONOMOUS KAKINADA
Remarks	

BRIDGE COURSE

The Department of Computers takes up a Bridge Course for I B.Com(CA). Students who did not read Computers as their subject at their intermediate level. To get them acquainted with the subject, a five-day programme is being held where in the total introduction of the syllabus is covered and there by the student can rise up to a level to understand the subject.

OBJECTIVIES:

- 1) To be able to learn the Computer terms
- 2) To be able to get a overall view of the subject
- 3) To be able to understand the weightage of the subject in competitive examinations

I B.COM(CA) 2018-2019

COMPUTERS BRIDGE COURSE ATTENDANCE

S.NO	Name of the Student	11/06/18	12/06/18	13/06/18	14/06/18	15/06/18
1.	PENUMALLA SAI DEVI	P	P	P	P	P
2.	BOODU BINDU MADHAVI	P	P	P	P	P
3.	DOMA VINODINI	P	P	P	A	P
4.	JONNADA DURGA	P	A	P	P	P
5.	KOLLU JYOTHI	P	P	P	P	P
6.	CHINTHA SIVANANDINI	P	P	P	P	P
7.	SURADA MANJALI	P	P	P	P	P
8.	MUMMASANI VEERAVENI	P	A	P	P	P
9.	MAGAPU RAMYA	P	P	P	P	P
10.	SATYA VEERA LAKSHMI SALADI	P	P	P	P	P
11.	DEVI KATTA	P	P	P	A	P
12.	SHARMILA SHAIK	P	P	P	P	P
13.	GANGARATNAM GURUJU	P	P	P	P	P
14.	PINAPOTHU MADHURI	P	P	P	P	P
15.	PEMMADI DEVI MAHALAKSHMI	P	P	P	P	P
16.	KETHADI MOUNIKA	P	P	A	P	P
17.	YELUGUBANTI RAMA DURGA	P	P	P	P	P
18.	MYDHI ANURADHA	P	P	P	P	P

19.	OLETI DEVI PRIYANKA	P	P	P	P	P
20.	GANDHA. MOUNIKA	P	P	P	P	P
21.	MYLAPALLI .DHARANI	P	P	P	A	P
22.	RAYA GIRIJA RAMANI	P	P	P	P	P
23.	KANDULA BHIVALA RANI	P	P	P	P	P
24.	TOKKUDUBIYYAPU NAGA DURGA BHAVANI	P	P	A	P	P
25.	JUTHUGA SULOCHANA	P	P	P	P	P

Suneetha

Signature of the Lecturer

A.S.D.GOVERNMENT DEGREE COLLEGE FOR WOMEN (A), KAKINADA

COMPUTER FUNDAMENTALS

I B.COM(CA). BRIDGE COURSE 2018-2019.

S.NO	DATE	SYLLABUS
01	11-06-18 Monday	❖ HARD WARE & SOFTWARE
02	12-06-18 Tuesday	❖ COMPONENTS OF A COMPUTER
03	13-06-18 Wednesday	❖ PERIPHERALS
04	14-06-18 Thursday	❖ TYPES OF COMPUTERS
05	15-06-18 Friday	❖ OPERATING SYSTEM



Signature of the Lecturer

A.S.D.GOVERNMENT DEGREE COLLEGE FOR WOMEN (A), KAKINADA



శ్రీ విద్యా ప్రపథాం

BRIDGE COURSE TIME TABLE

I B.Com(CA) TIME TABLE

2018-2019

DAY	TIMINGS
11-06-18 Monday	9AM-10AM CF
12-06-18 Tuesday	9AM-10AM CF
13-06-17 Wednesday	9AM-10AM CF
14-06-17 Thursday	9AM-10AM CF
15-06-17 Friday	9AM-10AM CF



Signature of the Lecturer

Introduction to Computer

Many people believe that knowing how to use a computer, is one of the basic skills needed to succeed in the workplace. In order to use the computer it is necessary to understand how the computer works.

Hardware

Computer hardware is made up of the equipment used to make up your computer unit. These parts include your monitor, central processing unit (CPU), keyboard, mouse, printer, and modem.

The computer is an electronic machine that performs the following four general operations:

- Input
- Storage
- Processing
- Output.

Input

The input hardware allows you to enter data into the computer. The primary devices used are the keyboard and mouse.

Keyboard - The keyboard looks like the typewriter. A numeric keypad is located to the right of the keyboard. Numeric keys have the same placement as a 10-key calculator, which allow the operator to enter data rapidly.

Mouse - The mouse is a device that allows you to control the movement of the insertion point on the screen. The operator places the palm of the hand over the mouse and moves it across a mouse pad, which provides traction for the rolling ball inside the device. Movement of the ball determines the location of the I beam on the computer screen. When the operator clicks the mouse the I beam becomes an insertion point which indicates the area you are working on the screen. You can also click the mouse and activate icons or drag to move objects and select text. There are other input devices, such as touch screen, joystick, modem, scanner, and voice recognition systems.

Processing

The central processing unit or (CPU) is the "brain" of your computer. It contains the electronic circuits that cause the computer to follow instructions from ROM (read only memory) or from a program in RAM (random access memory). By following these instructions information is processed. The CPU contains three parts.

1. *Arithmetic Logic Unit* - ALU is where the "intelligence" of the computer is located. It can add and compare numbers. To multiply 2×4 the computer would add $2 + 2 + 2 + 2$. The ALU makes decisions by determining if a number is greater, less, or equal to the other number. Processing is completed in nanoseconds, which is a billionth of a second.

2. *Memory* - Two types of memory contained on a chip are RAM (Random Access Memory) or ROM (Read Only Memory). ROM memory has been installed on your computer by the manufacturer and can not be altered. ROM is the memory that determines all the basic functions of the operation of your machine, such as startup, shut down, and placing a character on the screen. RAM is temporary memory, which displays the information you are working on. RAM remembers what you see on your screen while you are working. Today's applications required large amounts of temporary memory, which may require you to upgrade and add more RAM memory.

3. *Control Unit* - This is the part of the unit, which directs information to the proper places in your computer, such as calculation of information by the ALU unit or to store and print material.

Output

Output devices such as a monitor or printer make information you input available for you to view or use.

A monitor's front is called a screen with a cathode ray tube (CRT) attached to the screen. Portable computers use a (LCD) liquid crystal display. Today's super video graphics array (SVGA) monitors display 256 sharp and clear colors.

Printers used with computers fall into two categories, impact or nonimpact. Impact printers, such as dot matrix print by contact against a ribbon making imprint on paper. Inkjet printers print images by not touching the paper. Ink jet printers spray ink onto the page while a laser printer works like a copying machine. Laser printers print a higher quality product but cost from \$500 to \$10,000 whereas an ink jet produces better quality than a dot matrix and can be purchased from \$150 to \$300. The personal computer user most commonly purchases an ink jet printer for home use.

Storage

Auxiliary storage devices, also called secondary storage devices, are used to store instructions and data when they are not being used in memory. Two types of auxiliary storage more often used on personal computers are floppy disks and hard disks. Also, CD-ROM drives are common.

Floppy Disks - A floppy disk is a circular piece of oxide-coated plastic that stores data as magnetic spots. Personal computers most commonly use floppy disks that are 3 1/2 inches in diameter.

To read data stored on a floppy disk or to store data on a floppy disk, you insert the floppy disk in a disk drive. If the disk is unused, you must format or initialize it before your computer will allow you to store data on it. Formatting organizes the tracks around the disk into pie like slices called sectors which make it possible for your computer to save and retrieve information. The density of the bits on the track and number of tracks on a disk determine the number of characters that can be stored.

Floppy disks are identified as being double density or high density. Most machines purchased after 1993 will use a high-density disk. A machine that has a double density drive can't process a high-density disk. Note the chart below for disk information.

Floppy Disk Capacity

<u>Description</u>	<u>Bytes</u>
<u>5 1/4 inch disk</u>	
Double-sided, double-density	360 KB
Double-sided, high-density	1.2MB
<u>3 1/2 inch disk</u>	

Double-sided, double-density 720 KB

Double-sided, high-density 1.4 MB

1.4 MB is equal to 500 pages of text.

Floppy disks must be handled with care to preserve data. Follow the suggestions to protect your floppy disk.

1. Store in box or disk storage container.
2. Protect disk from dust.
3. Keep disk out of sunlight and away from extremes of hot or cold.
4. Don't press hard when writing on labels. Use a felt tip pen.
5. Insert metal side into drive first with the hub of the disk down.
6. Don't store disk near magnetic sources.

Hard Drive - Much like a floppy, the hard disk located inside the computer case is made of a stack of rotating disks, called platters. Data is recorded on a series of tracks that have been divided into sectors. Most computers have one hard drive, located inside the computer case. If a computer has one hard drive, it is called drive C. If a computer has additional hard drives, they are called drives D, E, and so on. A hard drive stores your programs. When you buy a new program, you must install the program files to your hard drive before you can use the program. A hard drive stores your data files such as documents spreadsheets, and graphics.

CD-ROM Storage - Since each CD-ROM can store 600 million bytes of data or 300,000 pages of text, they are today's answer to make you computer feel like a machine twice its size. Because of its external storage, you can use your machine to access an encyclopedia, games, graphics, and a variety of sources that use large amounts of memory.

Bits and Bytes

A computer stores data in units called bits and bytes. Computer chips called integrated circuits have one of two states, off or on. Therefore, a system was developed that used only two numbers, 0 and 1. Zero representing off and 1 representing on. You can think of this as a sort of light switch. Each switch is called a bit.

Bits are grouped together in sets of eight. Each set of eight bits is called a byte. Setting different combinations of those eight "on and off" combinations can be developed to stand for letters numbers, spaces, and symbols. For practical purposes, think of a byte as one character. When computers refer to memory or storage they refer to terms using the following forms of measurement.

8	bits	=	1	byte
1024	bytes	=	1	Kilobyte (K)
1024	Kilobytes	=	1	Megabyte (MG)
1024 Megabytes = 1 Gigabyte (GB)				

Today's hard drives are usually two or more gigabytes of memory and a floppy disk has 1.44 megabytes of memory.

A BRIEF HISTORY OF COMPUTER

The computer as we know it today had its beginning with a 19th century English mathematics professor name Charles Babbage. He designed the Analytical Engine and it was this design that the basic framework of the computers of today are based on.

Generally speaking, computers can be classified into three generations. Each generation lasted for a certain period of time, and each gave us either a new and improved computer or an improvement to the existing computer.

First generation: 1937 – 1946 - In 1937 the first electronic digital computer was built by Dr. John V. Atanasoff and Clifford Berry. It was called the Atanasoff-Berry Computer (ABC). In 1943 an electronic computer name the Colossus was built for the military. Other developments continued until in 1946 the first general– purpose digital computer, the Electronic Numerical Integrator and Computer (ENIAC) was built. It is said that this computer weighed 30 tons, and had 18,000 vacuum tubes which was used for processing. When this computer was turned on for the first time lights dim in sections of Philadelphia. Computers of this generation could only perform single task, and they had no operating system.

Second generation: 1947 – 1962 - This generation of computers used transistors instead of vacuum tubes which were more reliable. In 1951 the first computer for commercial use was introduced to the public; the Universal Automatic Computer (UNIVAC 1). In 1953 the International Business Machine (IBM) 650 and 700 series computers made their mark in the computer world. During this generation of computers over 100 computer programming languages were developed, computers had memory and operating systems. Storage media such as tape and disk were in use also were printers for output.

Third generation: 1963 - present - The invention of integrated circuit brought us the third generation of computers. With this invention computers became smaller, more powerful more reliable and they are able to run many different programs at the same time. In 1980 Microsoft Disk Operating System (MS-Dos) was born and in 1981 IBM introduced the personal computer (PC) for home and office use. Three years later Apple gave us the Macintosh computer with its icon driven interface and the 90s gave us Windows operating system.

Block diagram of computer

Block Diagram of Computer and its Explanation

Block Diagram of Computer
A computer can process data, pictures, sound and graphics. They can solve highly complicated problems quickly and accurately.

*InputUnit:

Computers need to receive data and instruction in order to solve any problem. Therefore we need to input the data and instructions into the computers. The input unit consists of one or more input devices. Keyboard is the one of the most commonly used input device. Other commonly used input devices are the mouse, floppy disk drive, magnetic tape, etc. All the input devices perform the following functions.

- Accept the data and instructions from the outside world.
- Convert it to a form that the computer can understand.
- Supply the converted data to the computer system for further processing.

Storage Unit:

The storage unit of the computer holds data and instructions that are entered through the input unit, before they are processed. It preserves the intermediate and final results before these are sent to the output devices. It also saves the data for the later use. The various storage devices of a computer system are divided into two categories.

1. Primary Storage: Stores and provides very fast. This memory is generally used to hold the program being currently executed in the computer, the data being received from the input unit, the intermediate and final results of the program. The primary memory is temporary in nature. The data is lost, when the computer is switched off. In order to store the data permanently, the data has to be transferred to the secondary memory. The cost of the primary storage is more compared to the secondary storage. Therefore most computers have limited primary storage capacity.

2. Secondary Storage: Secondary storage is used like an archive. It stores several programs, documents, data bases etc. The programs that you run on the computer are first transferred to the primary memory before it is actually run. Whenever the results are saved, again they get stored in the secondary memory. The secondary memory is slower and cheaper than the primary memory. Some of the commonly used secondary memory devices are Hard disk, CD, etc.,

Memory Size:

All digital computers use the binary system, i.e. 0's and 1's. Each character or a number is represented by an 8 bit code.

The set of 8 bits is called a byte. A character occupies 1 byte space. A numeric occupies 2 byte space. Byte is the space occupied in the memory.

The size of the primary storage is specified in KB (Kilobytes) or MB (Megabyte). One KB is equal to 1024 bytes and one MB is equal to 1000KB. The size of the primary storage in a typical PC usually starts at 16MB. PCs having 32 MB, 48MB, 128 MB, 256MB memory are quite common.

OutputUnit:

The output unit of a computer provides the information and results of a computation to outside world. Printers, Visual Display Unit (VDU) are the commonly used output devices. Other commonly used output devices are floppy disk drive, hard disk drive, and magnetic tape drive.

ArithmeticLogicalUnit:

All calculations are performed in the Arithmetic Logic Unit (ALU) of the computer. It also does comparison and takes decision. The ALU can perform basic operations such as addition, subtraction, multiplication, division, etc and does logic operations viz, >, <, =, 'etc. Whenever calculations are required, the control unit transfers the data from storage unit to ALU once the computations are done, the results are transferred to the storage unit by the control unit and then it is send to the output unit for displaying results.

ControlUnit:

It controls all other units in the computer. The control unit instructs the input unit, where to store the data after receiving it from the user. It controls the flow of data and instructions from the storage unit to ALU. It also controls the flow of results from the ALU to the storage unit. The control unit is generally referred as the central nervous system of the computer that control and synchronizes its working.

CentralProcessingUnit:

The control unit and ALU of the computer are together known as the Central Processing Unit (CPU).TheCPUis like brain performs the following functions:

- Itperformsallcalculations.
- Ittakesalldecisions.
- Itcontrolsallunitsofthecomputer.

A PC may have CPU-IC such as Intel 8088, 80286, 80386, 80486, Celeron, Pentium, Pentium Pro, Pentium II, Pentium III, Pentium IV, Dual Core, and AMD etc.

1. Control Unit: It is responsible for directing and coordinating most of the computer system activities. It does not execute instructions by itself. It tells other parts of the computer system what to do. It determines the movement of electronic signals between the main memory and arithmetic logic unit as well as the control signals between the CPU and input/output devices.

2. Arithmetic logic Unit: ALU performs all the arithmetic and logical functions i.e. addition, subtraction, multiplication, division and certain comparisons. These comparisons include greater than, less than, equals to etc. The ALU controls the speed of calculations.

3. Registers: It is a special temporary storage location within the CPU. Registers quickly, accept, store and transfer data and instructions that are being used immediately (main memory hold data that will be used shortly, secondary storage holds data that will be used later). To execute an instruction, the control unit of

the CPU retrieves it from main memory and places it onto a register. The typical operations that take place in the processing of instruction are part of the instruction cycle or execution cycle. The instruction cycle refers to the retrieval of the instruction from main memory and its subsequence at decoding. The process of alerting the circuits in CPU to perform the specified operation. The time it takes to go through the instruction cycle is referred to as I-time.

4. Bus: The term Bus refers to an electrical pathway through which bits are transmitted between the various computer components. Depending on the design of the system, several types of buses may be present. The most important one is the data bus, which carries the data through out the central processing unit. The wider the data bus, the more data it can carry at one time and thus the greater the processing speed of the computer. Ex: Intel 8088 processor uses a data bus of 8 bits wide. Some super computers contain buses that are 128 bits wide. WHAT IS RAM AND ITS FUNCTION>>

The main memory of the computer is called as Random Access Memory (RAM). The name derives from the fact that data can be stored in and retrieved at random, from anywhere in the electronic main memory chips in approximately the same amount of time, no matter where the data is. Main memory is in an electronic or volatile state. When the computer is off, main memory is empty, when it is on it is capable of receiving and holding a copy of the software instructions, and data necessary for processing.

Because the main memory is a volatile form of storage that depends on electric power can go off during processing, users save their work frequently on to non volatile secondary storage devices such as diskettes or hard disk.

The main memory is used for the following purposes:

1. Storage of the copy of the main software program that controls the general operation of the computer. This copy is loaded on to the main memory when the computer is turned on, and it stays there as long as the computer is on.
2. Temporary storage of a copy of application program instruction, to be received by CPU for interpretation and processing or execution.
3. Temporary storage of data that has been input from the key board, until instructions call for the data to be transferred in to CPU for processing.
4. Temporary storage of data, which is required for further processing or transferred as output to output devices such as screen, a printer, a disk storage device.

Classification of computers based on memory size In terms of capacity, price performance, computers can be broadly classified as follows.

- Main Frame Computers.
- Mini Computers.
- Micro Computers.

Main Frame Computers:

They are most expensive of all the computers, are very big in size and offer maximum computing power. A large number of peripherals can be attached to them. They are generally used in large networks and the mainframe works as central computer or node. All other smaller terminals are connected to central computer or server through satellite link.

A typical example is the air line reservation system. The main frame computer is placed at the head office, where all the information about all flights is stored and small computers are placed at various branches and are attached to the central data bank so that up to date information of all flights is always available.

The structural configuration of mainframe consists of • Data communication equipment. • Interface equipment. • Primary storage. • Secondary storage. • Central processors with multiprogramming facilities.

Characteristics:

- These are large general purpose computers capable of handling all kinds of problems whether scientific or commercial.
- Can accept and transfer data from I/O devices at the rate of million bytes per second. • Can accept all type of high level languages. • Can support large number of terminals say up to 100 or more? • They have flexibility to operate automatically.
- They have high on line secondary storage capacity and can support a number of peripheral devices like magnetic tape drives, hard disk drives, visual display units etc.
- They have high cache memory, to process applications faster than mini or micro computers. Mini Computers:

These are the smaller versions of the mainframe. They offer same computing power as their bigger counterparts but a small/number of peripherals can be attached to the mini computer. It is comparatively cheaper in cost, small in size, very rugged and reliable. It does not require air conditioning and can be operated at room temperature. In business environment a mini system can be 'tailor made' for job specification.

Characteristics:

- They can accept and transfer data from I/O devices at the maximum speed of 4 million bytes per second.
- Can support up to a maximum of 20 terminals. • They usually employ microprocessors in the CPU for data storage and data manipulation. • They have faster processing speed. • In most mini computers, data and instructions are stored in fixed word locations. They have main memory ranging from 256kb to 12 Mb and word length of 16/32 bits and are designed for 4 to 8 users in time sharing models. Mini Computers can be sub classified in to • Mini minis • Midi minis • Maxi minis(super minis)

Micro Computers (also termed as miniaturized mini computer): They can carry input, storage, arithmetic, logic, control and output functions. They use silicon made micro processor chips which are of a size of 5mm square and 0.1 mm thick, with layers of etched and printed circuits-containing all elements required to process binary encoded data.

These systems use random access memory and read only memory as primary storage. They range from single board size to a system containing many circuit boards mounted in a cabinet. They are light enough to be moved easily and are designed to be used by one person at a time.

A typical microcomputer has a keyboard for input and user diskettes and floppy disk drives to enter data and programs and to receive processed outputs. They use magnetic tape and floppy discs as secondary storage devices.

A visual display unit and/or character printer is used to prepare output in a human readable form. All micro computers are byte addressable machines. They use micro processor chips viz. Features of Micro Computers:

They use very little power, require little air conditioning and does not require special wiring, raised floors.

They are stable and reliable. Personal Computers:

They are the one of the latest type of micro computers. They are called so because they are designed for personal use of individuals or small business units, office automation units or professionals.

Personal computers can be used for basic programming, fun and games, business and professional applications, tele communications; data base management, accounting, and word processing. What is a hard disk? What are its features

Hard disk is one of the storage devices, developed to store huge amount of data. The introduction of high capacity hard disks for micro computer system solved two serious problems related to the limited storage capacity of diskettes.

First, as a business begins to use micro computers extensively, the amount of software acquired and data collected tends to grow substantially. As a result the number of diskettes required, increases, dramatically second, the largest file that can be accessed at one time is limited to the capacity of the main memory and the storage medium. A hard disk can store huge amount of data in a most convenient way.

In hard disk system, data is stored in the same way as it is on diskettes. A series of tracks are divided in to sectors when the disk is formatted. Hard disk is made out of a rigid substance that is capable of storing a greater amount of data than the soft material used for diskettes. The hard disk drives for the micro computer can be internal or external.

In a disk pack, the access mechanism can position itself to access data from each of the 200 cylinder is a set of all tracks with the same distance from the axis about which the disk pack rotates. In this example there are 10 tracks in each cylinder.

The capacity of diskettes in wide use today ranges from 360KB to 144MB each. Microsoft hard disk capacity ranges from 10MB to 1GB or higher. Hard disks larger capacity allows the user to store larger files and larger programs than can be used with diskettes. Access time with the hard disk is much lower than that of diskette i.e., data retrieval is much faster with the hard disk than a diskette. [[File:CM-rie.

Characteristics of a Hard disk:

1. They are rigid metal platters connected to a central spindle.
2. The entire disk unit is placed in a permanently sealed container.
3. Air that flow through the container is filtered to prevent contamination.
4. The disks are rotated at a very high speed (usually around 3600 RPM)
5. These disk drives can have four or more disk platters in a sealed unit.

6. In most of the disk units, the read/ write head does not touch the surface of the disk. Instead they are designed to float from 0.5 to 1.25 millionth of an inch from the disk surface. (Flying head design). Because the heads float so close to the sensitive disks, any contamination such as dust particle or hair, cause a head crash or a disk crash, which destroys some or all the data on the disk. Therefore hard disks are handled under sterile conditions.

7. Hard disk technology was introduced by IBM (1970) since then they have become the most necessary memory hungry software

What is an operating system? What are its functions?

The operating system is a program that acts as an interface between the user and the hardware. It is a collection of programs that coordinates the operations of computer hardware and software.

