

Sizes of Basic Data Units

Name	Equal to:	Size in Bytes
Bit		1 bit 1/8
Nibble	4 bits	1/2 (rare)
Byte	8 bits	1
Kilobyte	1,024 bytes	1,024
Megabyte	1,024 kilobytes	1,048,576
Gigabyte	1,024 megabytes	1,073,741,824
Terrabyte	1,024 gigabytes	1,099,511,627,776
Petabyte	1,024 terrabytes	1,125,899,906,842,624
Exabyte	1,024 petabytes	1,152,921,504,606,846,976
Zettabyte	1,024 exabytes	1,180,591,620,717,411,303,424
Yottabyte	1,024 zettabytes	1,208,925,819,614,629,174,706,176

Then there is the hypothetical "Googolbyte" which would be a number of bytes equal to a 10 followed by 100 zeroes.

India's Rank in World's Top 500 (2020)

Rank	Site	Name
67	Indian Institute of Tropical Meteorology	Pratyush (Cray XC40)
120	National Centre for Medium Range Weather Forecasting	Mihir (Cray XC40)

Top Ten Super Computers in the World (2020)

Rank	Super Computer	COUNTRY
1	Fugaku	Japan
2	Summit	USA
3	Sierra	USA
4	Sunway TaihuLight	China

5	Tianhe - 2A	China
6	HPC5	Italy
7	Selene	USA
8	Frontera	USA
9	Marconi - 100	Italy
10	Piz Daint	Switzerland

STANDARD QUERY LANGUAGE (SQL)

SQL is the standard command set used to communicate with the relational database management system.

Advantages :

It is the high level language that provides a greater degree of abstraction than procedural languages. The language while being simple and easy to learn handle complex situations.

The six main categories of SQL commands

1. Data Definition Language (DDL)
2. Data Manipulation Language (DML)
3. Data Query Language (DQL)
4. Data Control Language (DCL)
5. Data Administration Commands (DAC)
6. Transactional Control Commands (TCC)

DDL

It is used to create, alter, drop, replace and truncate database objects.

DML

It commands let users insert, modify and delete the data in the database. SQL provides three data manipulation statements insert, update and delete.

DCL

It consists of commands that control the user access to the database objects.

The four transactional control commands

COMMIT, ROLLBACK, SAVEPOINT, SET TRANSACTIONS.

The data types available in SQL

STRING, CHAR, CHAR (n), VARCHAR2, VARCHAR, INT, NUMBER.

The types of data manipulation languages

- ◆ Procedural DMLs
- ◆ Declarative DMLs

The three primary types of relationships supported by a relational data base

one-to-one, one-to-many, many-to-many.

- ◆ **REVOKE** : This statement is used to remove database privileges.
- ◆ **Snapshot** : The data in the database at a particular moment is known as Database State on Snapshot of the Database.
- ◆ **Weak entity type** : Entity types that do not have key attribute of their own are called weak entity type.
- ◆ **Various Date data types available in SQL** : TIME, STAMP, LOB, BLOB, CLOB, BFILE.
- ◆ **OPEN, FETCH, CLOSE** : These are basic operations of a cursor outside of declaring the cursor.
- ◆ **Types of cursor** : Implicit, Cursors, Explicit Cursors

PL / SQL

PL/SQL is an acronym for programming language/SQL. SQL is a scripting language. PL/SQL block can contain any

number of SQL statements integrated with flow of control statements.

Types of PL/SQL block

- ◆ Declaration Section
- ◆ Executable Commands Section
- ◆ Exception Handling Section

Three categories of PL/SQL binding operations

- ◆ **In bind** : When a PL/SQL variable or host variable is stored in the database by an insert or update statement.
- ◆ **Out-bind** : When a database value is assigned to a PL/SQL variable or a host variable by returning clause of an insert, update or delete statement.
- ◆ **Define** : When a database value is assigned to a PL/SQL variable or a host variable by a select or fetch statement.

Delimiters

A delimiter is a simple or compound symbol that has a special meaning to PL/SQL.

Example

;	Statement termination
%	Attribute indicator
_	Single underscore
:	Host variable indicator
: =	Alignment operator
/* and */	Beginning and ending multi line command block delimiters

The types of literals

- ◆ Character literal
- ◆ Numeric literal
- ◆ String literal
- ◆ Boolean literal
- ◆ Datetime literal

Aurora

Aurora is the name of oracle's Java Engine.

The types of control structures

- ◆ **Conditional control** : It returns a boolean value.
- ◆ **Iterative control** : It executes a sequence of statement repeatedly.
- ◆ **Sequential control** : It executes a sequence of statements in the order in which they occur.

Message buffer

It can be upto 4096 bytes in length.

ROWID

It returns the binary address of a row in a database table.

ASP.NET

Active Server Page

- ◆ **Active** : An ASP page provides dynamic content that's updated every time that is accessed.

- ♦ **Server** : An ASP page contains script code that the web server executes.
- ♦ **Page** : An ASP page is a web page that the user navigates to and is displayed in his or her browser.

C++

C++ is an Object Oriented Programming Language. It was developed by Bjarne Stroustrup in 1983 at the AT & T Bell Laboratories.

The characteristic of C++

- ♦ Reduces complexity while solving problems.
- ♦ Correctness of results is ensured.
- ♦ Affordable in terms of hardware and other resources.
- ♦ Easier and cheaper for integrating existing software facilities and libraries.
- ♦ Portable i.e. can be used on different types of computers with little or no change in the programmes.

The types of character set

- ♦ Source characters
- ♦ Escape sequences / Execution characters

Types of tokens

C++ has the following tokens are :

- ♦ Keywords
- ♦ Identifiers
- ♦ Constants (literals)
- ♦ Punctuators (separators)
- ♦ Operators

The difference between C++ and Java

- ♦ C++ has pointers, Java does not
- ♦ Java is the platform independent as it works on any type of operating system.
- ♦ Java has garbage collection. C++ does not.

The difference between C & C++

- ♦ C++ is an object oriented programming but C is a procedure oriented programming.
- ♦ C is super set of C++.
- ♦ C cannot support inheritance, function, overloading, method overloading etc. but C++ can do this.
- ♦ In C program the main function could not return a value but in the C++ the main function should return a value.

JAVA

Java is an object programming language that was designed to be portable across multiple platforms and operating systems. It is developed by Sun Microsystems.

Java is modelled after the C++ programming language and includes special features that make it ideal for programs on the internet. It makes it easy to put interactive graphics and other special effect on a world wide web pages.

Uses of Java

Special programs, called applets, execute inside a web page with a capacity matching that of any traditional program. Further more, when you run a Java applet, the

remote server, Java transmits the applet to your browser across the internet. Hence rather than going out a computer store to buy software, Java applets let you download applications automatically when you need them.

RMI

Remote Method Invocation. A technology that allows an object running in one Java Virtual Machine to invoke methods on an object running in a different Java virtual machine.

Java IDL System

The Interface Definition Language (IDL) is an industry standard format useful for letting a Java client transparently invoking existing IDL object that reside server.

Filters in Java

Filters are nothing but simple Java classes which can manipulate request before it reaches the resources on the web server. Resources can be a **HTML file, Servlet Class, JSP etc.**

Cookies

Cookies are piece of data which are stored at the client's browser to track information regarding the user usage and habits.

C LANGUAGE

C is one of the high level languages. It is a general purpose language, which means it can be used to write programs of any sort.

Dennis Ritchie in 1972 developed a new language by inheriting the feature of both 'BCPL' and 'B' and adding additional features. He named the language as just 'C'.

Ken Thomson at AT ST Bell labs developed a language and named it B. Even the 'B' language was found to have some short comings to support development of both business applications and system software.

Basic Combining Programming Language (BCPL) was developed by Martin Richards, Cambridge University.

The features of C language

In C one can write programs like that of high level languages as in COBOL, BASIC, FORTRAN etc as well as it permits very close interaction with the inner workings of the computer.

It is a general purpose programming language but equally suited to writing a varieties of applications.

- ♦ It supports various data types.
- ♦ It follows the programming style based on fundamental control flow constructions for structured programming.
- ♦ Functions may be pre-defined or user defined and they may return values of basic types, structures, unions or pointers.

The advantages of C language

- ♦ Easy to write.
- ♦ Rich set of operators and functions that are built-in
- ♦ Support for bit-wise operation
- ♦ Flexible use of pointers
- ♦ Direct control over the hardware

- ◆ Ability to access BIOS/DOS routines.
- ◆ Interacting using interrupts
- ◆ Ability to write TSR programs
- ◆ Ability to create COM files
- ◆ Ability to write interface programs
- ◆ Incorporating assembly language in C program.

The disadvantages of C language

- ◆ C is considered difficult to learn. Because of its conciseness, the code can be difficult to follow.
- ◆ It is not suited to applications that require a lot of report formatting and data file manipulation.

Tokens

The smallest individual units of a C program are known as tokens.

Constants, identifiers, keywords, operators, special symbols, strings are different types of tokens.

String

A string is a sequence of characters ending with NUL. It can be treated as a one-dimensional array of characters terminated by a NUL character.

Qualifiers

Qualifiers or modifiers are identifiers that may precede the scalar data type (except float) to specify the number of bits used for representing the respective type of data in memory. The qualifiers in C are short, long, signed and unsigned.

Function

A function is a set of statements to perform a specific task.

Constant

A constant is a value that does not change during the program execution. A constant used in C does not occupy memory.

The different types of constants

1. Integer constants
2. Floating point constants
3. Character constants
4. String literals
5. Enumeration constants

Variable

Variable is a memory location, we can change its value at run time.

The rules for the identifier

- ◆ The first character must be an alphabet or underscore (-)
- ◆ Digits may be included in the variable
- ◆ The maximum number of characters in a word are 32. (It may vary depending upon the platform)
- ◆ No other special characters are allowed.

Key words

Keywords are reserved words that convey a special meaning to the language compiler.

The different types of C instructions

- ◆ Type Declaration Instruction
- ◆ Arithmetic Instruction
- ◆ Control Instruction

The types of data files

- ◆ Stream oriented or standard data files.
- ◆ System oriented or low level data files.

Recursion

Recursion is a technique which called and recalls of itself.

The types of macro formats

1. Simple
2. Parameterized

The different types of errors

- ◆ Compiler - Time errors
- ◆ Linker errors
- ◆ Runtime errors
- ◆ Logical errors

The primitive data types in C

Char, Int, Float, Double, Void

- ◆ **Char** : To work with all types of characters used in computer operations.
- ◆ **Int** : To work with an integer type of data in any computational work.
- ◆ **Float** : To work with the real type of data or scientific numbers in the exponential form.
- ◆ **Double** : To work with double precision of numbers when the approximation is very crucial.
- ◆ **Void** : It means nothing i.e., no data involvement in an action.

COMPUTER SECURITY

Computer security, cybersecurity, or information technology security (IT security) is the protection of computer systems and networks from information disclosure, theft of or damage to their hardware, software, or electronic data, as well as from the disruption or misdirection of the services they provide.

The field is becoming increasingly significant due to the continuously expanding reliance on computer systems, the Internet and wireless network standards such as Bluetooth and Wi-Fi, and due to the growth of "smart" devices, including smartphones, televisions, and the various devices that constitute the "Internet of things". Cybersecurity is also one of the significant challenges in the contemporary world, due to its complexity, both in terms of political usage and technology.

History

Since the Internet's arrival and with the digital transformation initiated in recent years, the notion of cybersecurity has become a familiar subject both in our professional and personal lives. Cybersecurity and cyber threats have been constant for the last 50 years of technological change. In the 1970s and 1980s

ABBREVIATIONS

WWW	World Wide Web
URL	Uniform Resource Locator
FTP	File Transfer Protocol
BIOS	Basic Input Output System
IBM	International Business Machine
CPU	Central Processing Unit
ALU	Arithmetic Logic Unit
DVD	Digital Video Device
MB	Mega Bytes
FORTRAN	Formula Translation
ASCII	American Standard Code for Information Interchange
MSD	Most Significant Digit
LAN	Local Area Network
WAN	Wide Area Network
EXE	Executable Files
CAD	Computer Aided Design
LCD	Liquid Crystal Display
USB	Universal Serial Bus
CRT	Cathode Ray Tube
UNIVAC	Universal Automatic Computer
OCR	Optical Character Recognition
CD-ROM	Compact Disc Read Only Memory
MOS	Metal Oxide Semiconductor
GB	Giga Byte

PROM	Programmable Read Only Memory
DRAM	Dynamic Random Access Memory
ROM	Read Only Memory
DTP	Desktop Publishing
KB	Kilo Byte
FAT	File Allocation Table
SRAM	Static Random Access Memory
CUI	Character User Interface
EEPROM	Electrically Erasable Programmable Read Only Memory
P2P	Peer to Peer
XML	Extended Markup Language
POP	Post Office Protocol
IT	Information Technology
DNS	Domain Name System
SMTP	Simple Mail Transfer Protocol
APPANET	Advanced Research Projects Agency Network
HTML	Hyper Text Markup Language
ISDN	Integrated Services Digital Network
TCP	Transmission Control Protocol
VIRUS	Vital Information Resource Under Siege
APL	A Programming Language
COBOL	Common Business Oriented Language
1 GL	First Generation Programming Language

IMPORTANT COMPUTER TERMS

- ◆ Staroffice
 - An application that is designed to work on any operating systems
 - Creates text document
 - Creates spreadsheets
 - Creates presentations
 - To draw
 - Creates a database
 - It refers to the activity to create, view, edit, manipulate, store and print documents
 - File → Save, Ctrl + S
 - File → Close
 - The thick horizontal line in the page area
 - The flashing vertical bar
 - Use delete and backspace keys
 - A set of characters and numbers in a certain style.
- ◆ Staroffice writer
- ◆ Staroffice calc
- ◆ Staroffice impress
- ◆ Staroffice draw
- ◆ Staroffice base
- ◆ Word processing
- ◆ To save a document
- ◆ To close a document
- ◆ End of document marker
- ◆ Insertion point
- ◆ To correct mistakes
- ◆ Font

- ◆ Fonts for business documents
 - Times New Roman
- ◆ Decorative fonts
 - Fajita
- ◆ Symbol fonts
 - Wingdings, symbols
- ◆ Highlighting the text
 - Used to review or find the key points in the document.
- ◆ Paragraph
 - Any text followed by a hard return.
- ◆ Types of alignments
 - Right, left, centre, justify
- ◆ First line indent
 - Used to indent the first line of the paragraph
- ◆ Hanging indent
 - The first line will hang outside the paragraph.
- ◆ Bulleted list
 - A bullet precedes each item in the list and the text is indented.
- ◆ Numbered list
 - All items of the list are numbered and the text is indented.
- ◆ Style
 - It is a named set of defaults for formatting text.
- ◆ Table
 - A grid with specified number of columns and rows.
- ◆ Cell
 - The intersection of a column and a row.
- ◆ Tab key
 - To move forward through the cell.
- ◆ Shift + Tab key
 - To move backward through the cell.
- ◆ Table formatting tool box
 - The tool box contains a number of icons used for various functions related to the table.
 - Used to combine two or more cells into a single cell.
 - Used to split a cell into two or more cells.
- ◆ Merge cells
 - 1 inch
- ◆ Split cells
 - 1.25 inch
- ◆ Default top and bottom margin
 - (i) page style dialog box
 - (ii) using rulers
- ◆ Default left and right margin
 - Default orientation. The length of the document will be more than the width
- ◆ Methods of changing the margin
 - The width will be more than the length
 - An area at the top of page
 - An area at the bottom of the page
 - Insert → Fields → Page number
- ◆ Portrait
 - Visicalc – visible calculator
- ◆ Landscape
 - invented by Dan Bricklin and Bon Frankston.
- ◆ Header
 - It is a worksheet used in a
- ◆ Footer
 - computer to create and quickly perform "what if" analysis of interrelated
- ◆ To insert page no. on every page
 - columnar data in workspaces
- ◆ First electronic spreadsheet
 - (i) Arithmetic Operators
 - (+, -, *, /, %, ^)
- ◆ Electronic spreadsheet
 - (ii) Comparative Operators
 - (=, >, <, >=, <=)
- ◆ Operators
 - (iii) Text Operators (&)
 - (iv) Reference Operators (:, !)
 - These operators return numeric results
 - These operators return either true or false
 - They combine sections of text to entire text
 - They combine areas
 - It generates a data series based on a defined pattern
 - A continuous group of cells in a worksheet
 - It is the default type of cell addressing
 - A cell address can be made absolute by using \$ sign in front of row and column names
- ◆ Arithmetic Operators
- ◆ Comparative Operators
- ◆ Text Operators
- ◆ Reference Operators
- ◆ Autofill
- ◆ Range
- ◆ Relative Cell addressing
- ◆ Absolute Cell addressing

- ◆ Functions
- ◆ Auto Format Sheet
- ◆ Data
- ◆ Data type
- ◆ Primitive Data type
- ◆ User defined data type
- ◆ Information
- ◆ Data processing
- ◆ Manual data processing
- ◆ Computerised data processing
- ◆ Database
- ◆ Searching
- ◆ Sorting
- ◆ Merging
- ◆ Filtering database
- ◆ Relational database
- ◆ Primary key
- ◆ DBMS
- ◆ SQL
- ◆ Autofilter
- ◆ Default filter
- ◆ Form
- ◆ Report
- ◆ Multimedia
- ◆ MMS
- ◆ CBT
- ◆ WBT
- ◆ Image formats
- ◆ GIF
- ◆ JPEG
- ◆ Sound
- ◆ Volume
- ◆ Frequency
- ◆ Sampling
- ◆ Cel Based Animation
- ◆ Object Based Animation
- ◆ Morphing
- ◆ Warping
- ◆ Compression
- ◆ Loseless compression
- Predefined formulae available in Star Office Calc.
- This facility helps format the worksheet with different predefined styles and colours.
- It is fact about people, places or some entities.
- Character, Number or Boolean.
- System defined or built-in data type.
- Users can define their own data type.
- Set of processed data that convey the relationship between data considered.
- Involves data collection, verification.
- If the data processing is carried out by long hand effort, we call it as manual data processing.
- Data processing using computer.
- A repository of connections of related data.
- A process to select a desired specific data from a database.
- A process of arranging data in some order.
- A process of joining data from two or more tables.
- A database that consists of a single data table.
- A database made up of a set of related tables.
- A key that uniquely identifies a record in a database table.
- It is a program that allows any number of users to access data, modify it and construct simple and complex requests to obtain and work with selected records.
- Structured Query Language.
- To display only the records, which match the value of the current field.
- Filter used with a condition.
- A screen that displays the fields of a record in a well-spaced out manner.
- A printed information that is assembled by gathering data based on user supplied criteria.
- It is a computer based presentation technique that incorporates text, graphics, sound, animation and video elements.
- It is an application that allows you to send and receive messages over cell phones.
- Computer Based Tutorials
- Web Based Tutorials
- GIF, JPG, Animated GIF, MPEG, Shockwave, NXview etc.
- Graphic Interchange Format
- Joint Photographic Experts Group
- We hear in analogue wave pattern
- The height of each crest in the wave
- The distance between the crests of the wave.
- The conversion of analogue sound waves to a digital format
- It consists of multiple drawings, each one a little different from the other. When displayed in rapid sequence, they appear to move.
- It is referred to as a slide or path animation, created by moving an object across a screen.
- A technique by which you can blend two or more images to form a new image.
- A technique of distorting a single image to represent something else.
- A technique by which a recurring set of information is identified and replaced by a single piece of information.
- Retains the exact image throughout the compression.

♦ Losing compression

♦ MIDI format

♦ AIFF

♦ SND

♦ MPEG

♦ AVI

♦ Plugin

♦ Star Office Impress

♦ Normal View

♦ Outline View

♦ Notes View

♦ Handouts View

♦ Slide Sorter View

♦ Master Page

♦ Custom Animation

♦ Slide Transition

♦ Media Player

♦ Object oriented

♦ Programming

♦ Object

♦ Encapsulation

♦ Polymorphism

♦ Class

♦ Inheritance

♦ C++

♦ Token

♦ Keywords

♦ Variable

♦ Constants

♦ Character constant

♦ String literal

♦ Operator

♦ Association

♦ Arithmetic operators

♦ Relational operators

♦ Logical operators

♦ Conditional operators

♦ Assignment operator

♦ User defined data type

♦ Built-in data type

- Provides a comparatively higher ratio of compression, but results in some loss of quality.
- Musical Instrumental Digital Interface
- Audio Interchange File Format
- Sound
- Moving Pictures Experts Group
- Audio Video Interleave
- A helper application that can be launched by the browser to help play sound or video.
- A star office application that allows you to create attractive and professional looking presentations.
- To create and edit slides
- To reorder slides, edit slide titles and headings.
- To add notes to the slides or view any existing note for the Slide.
- To scale the slides so that several slides can fit into a page.
- To view miniature images of all the slides in the presentation. It is used to rearrange slides.
- It can be used to specify basic background information that needs to be included in all the slides.
- It displays various options that allow you to add or modify animation effects to elements of a slide.
- It displays various transition effects that can be attached to a slide along with other options that allow you to control the transition of the slides from one to another.
- Helps you to preview a movie and sound files.
- It facilitates the way of problem solving
- by combining data and operations that are to be performed on the data.
- A group of related functions and data that serves those functions
- The mechanism by which the data and functions are bound together within an object definition.
- The ability of an object to respond differently to different messages.
- A template for entities that have common behaviour.
- The process of acquiring the base class properties.
- It was developed at AT and T Bell laboratories by Bjarne Stroustrup. The name C++ was coined by Rick Mascitti
- The smallest individual unit in a program.
- They have special meaning to the language compiler.
- Memory boxes that hold values or constants.
- Data items whose values cannot be changed.
- A constant that contains a single character within single quotes.
- A sequence of characters surrounded by double quotes (Array of characters).
- It specifies an operator to be performed that yields a value.
- The logical grouping of operands and the operators for evaluation.
- Used to perform mathematical operations (+, -, *, /, %, + =, - =, * =, / =, % =)
- used to compare values (==, >, <, >=, <=, !=)
- Combines the results of one or more conditions. (&&, ||, !)
- Ternary Operator (?:)
- Used to assign the result of an expression to the variable.
- It enables a programmer to invert his/her own data type and define values.
- They are predefined in the compiler.

- ◆ Pointers
- ◆ Modifier
- ◆ Typecast
- ◆ Header file
- ◆ Cin
- ◆ Cout
- ◆ >>
- ◆ <<
- ◆ Assignment statement
- ◆ Control statements
- ◆ Switch statement
- ◆ Looping
- ◆ For loop
- ◆ Continue
- ◆ break
- ◆ Functions
- ◆ Parameters
- ◆ Call by value
- ◆ Call by reference
- ◆ Inline functions
- ◆ Void
- ◆ Scope of a variable
- ◆ Local Scope
- ◆ Function Scope
- ◆ File scope
- ◆ Scope resolution operator(::)
- ◆ Array
- ◆ One dimensional array
- ◆ Multidimensional array
- ◆ Sorting
- ◆ Strlen
- ◆ Strcpy
- ◆ Strcmp
- ◆ Class
- ◆ Encapsulation
- ◆ Data hiding
- A variable that holds a memory address.
- Alters the basic data type to yield new Data type.
- The process of changing the data type of the value stored in a variable.
- Comprises of all standard declarations and definition for predefined functions.
- predefined object that corresponds to a input stream
- predefined object that corresponds to a output stream.
- extraction or get from operator
- Insertion or put to operator
- Assigns a value on the right hand side of an expression to the variable on the left hand side of the assignment operator.
- Statements that cause jumps of control from one part of a program to another.
- A multiple branching statement where based on a condition the control is transferred to one of the many possible points.
- Executing a set of instructions repeatedly for a certain number of times.
- Entry controlled loop used when an action is to be repeated for a predetermined number of times.
- It forces the next iteration of the loop to take place, skipping any code following the continue statement in the loop body.
- A loop's execution is terminated when the test condition evaluates to false.
- The executable segments in a program.
- The channels through which data flows from call statement to the function.
- the called function creates new variables to store the value of the arguments passed to it. Any change in the formal parameter is not reflected back to the actual parameter.
- The called function arguments – formal parameters become alias to the actual parameters in the calling function. Any change made in the formal parameter is reflected back in the actual parameter.
- It looks like a normal function in the source file but inserts the function's code directly into the calling program.
- The functions that return no value is declared as void.
- The accessibility of a variable.
- A local variable is defined within a block
- The function scope of variables is extended to the function block and all sub-blocks therein.
- The scope of a file scope variable is the entire program.
- Used to refer variables declared at file level where the local and file scope variables have the same name.
- It is a derived data type that can hold several values of the same type and they are referred by a common name.
- Comprising of finite homogeneous elements.
- Comprising of elements each of which is itself a one dimensional array.
- Arranging the data in a given array either in ascending or descending order.
- String function defined in string. h which returns the number of characters stored in the array.
- String function which copies source string to target string.
- String function which compares the two given strings and returns 0 if strings are equal, returns >0, if String 1 is greater than String 2, otherwise the value is less than 0.
- It is a way to bind the data and its associated functions together.
- The binding of data and functions together into a single entity is referred to as encapsulation
- It refers the members and functions declared under private and are not accessible by members outside the class.

COMPUTER AWARENESS – IMPORTANT QUESTIONS

1. developed a SAGA-220 super computer in 2011.
A) NASA B) C-DAC
C) BARC D) ISRO Ans : (D)
2. The earlier computers, which were massive in size, were based on
A) Vacuum tubes B) Core 2 duo
C) P4 processor D) Microprocessor Ans : (A)
3. Who described the feature 'read one card at a time of tabulating machine'?
A) Herman Hollerith B) John Pele
C) John Von Newmann D) Howard Aiken Ans : (A)
4. Any computer of computer you can see and touch is
A) Storage B) Software
C) Hardware D) Peripheral Ans : (C)
5. Through which one of the following the speed of the processor of the computer is measured?
A) Hz B) Boo
C) BPS D) MIPS Ans : (D)
6. Which one of the following is a computer virus?
A) Software program B) IC 7344
C) Bacteria D) Virus Ans : (A)
7. Which one of the following has been developed as a supercomputer project by the Bhabha Atomic Research Centre (BARC)?
A) Anupam B) Chips
C) Flosalver Mark D) Param padam Ans : (A)
8. What is Anupam?
A) A computer software
B) A newly designed missile
C) A super computer
D) A research institute Ans : (C)
9. Which one of the following terms is not associated with information technology?
A) Modem B) Light storage
C) Upload D) Cyber space Ans : (B)
10. The operation of combining two cells into a single cell in excel is referred to as
A) Join table B) Merge table
C) Merge cells D) Join cells Ans : (C)
11. Which of the following is required to create an HTML document?
A) Browser B) Internet
C) Search engine D) Text editor Ans : (D)
12. The michele anjelo virus is
A) A computer virus
B) A cancerous virus
C) A cancer protective rats
D) Viruses spread in rats Ans : (A)
13. Computers use the number system to store data and perform calculations.
A) Binary B) Octal
C) Decimal D) Hexadecimal Ans : (A)
14. A storage device that stores the same data on several different disks so if one gets damaged, another one will have the same data is referred to as
A) RAID B) Magnetic tape
C) Magnetic disk D) Floppy disk Ans : (A)
15. Which is commonly used protocol for exchanging files over any network that supports the TCP/IP protocol
A) SMTP B) HTTP
C) TCP D) FTP Ans : (D)
16. By default, you documents print in mode.
A) Landscape B) Portrait
C) Page setup D) Print view Ans : (B)
17. Connection or link to other documents or web pages that contain related information is called
A) Domain name
B) Hyperlink
C) Electronic commerce
D) Dial- up Ans : (B)
18. What are the two parts of an e-mail address?
A) Login name and password
B) User name and domain name
C) Legal name and phone number
D) User name and street address Ans : (B)
19. In windows ME, what does ME stands for?
A) Millennium B) Micro-expert
C) Macro-expert D) Multi-expert Ans : (A)
20. The fastest computer of the world is
A) T-3A B) Yenha-3
C) J-8 D) Param - 10,000 Ans : (A)
21. Computer system is controlled by its
A) CPU B) RAM
C) ROM D) DVD Ans : (A)
22. Transformation of input into output is performed by
A) Storage B) CPU
C) Memory D) Peripherals Ans : (B)
23. Computer that are portable and convenient for users who travel, are known as
A) Minicomputer B) File servers
C) Laptop D) Super computer Ans : (C)
24. The central processing unit is an example of
A) An output unit B) Software
C) Hardware D) Peripheral Ans : (C)
25. The brain of any computer system is
A) ALU B) CPU
C) Control unit D) Memory Ans : (B)
26. The ALU performs operation.
A) ASCLL B) Algorithm
C) Logarithm D) Arithmetic Ans : (D)

27. ALU Stands for
A) Algorithm and logarithm unit
B) Algorithm and logical unit
C) Arithmetic and logarithm unit
D) Arithmetic and logical unit
Ans : (D)
28. The first computer architecture was introduced in
A) 1968
B) 1970
C) 1971
D) 1973
Ans : (B)
29. Which of the following is responsible for all types of calculations?
A) ALU
B) BUS
C) Control unit
D) Registers
Ans : (A)
30. The three main parts of the processor are
A) ALU, control unit and registers
B) ALU, control unit and RAM
C) Cache, control unit and register
D) Control, unit registers and RAM
Ans : (A)
31. The hardware in which data may be stored for a computer system is called
A) Bus
B) Control unit
C) Memory
D) Register
Ans : (C)
32. Which of the following manages computer resources?
A) ALU
B) BUS
C) I/O unit
D) Control unit
Ans : (D)
33. Intel Pentium CPU is a based processor.
A) CISC
B) RISC
C) MISC
D) LISC
Ans : (B)
34. The register holds machine instructions.
A) DOS
B) BUS
C) Input
D) Instruction
Ans : (D)
35. invented the microprocessor.
A) Joseph jacquard
B) Herman H Goldstein
C) Marcian E Hoff
D) Jonathn Smith
Ans : (C)
36. What is the software used to drive microprocessor-based systems?
A) Assembly language
B) Micro language
C) Machine language
D) Firmware
Ans : (A)
37. is the last phase of software development.
A) Maintenance
B) Testing
C) coding
D) Design
Ans : (A)
38. What is an engineering approach for software development?
A) Software developing
B) Software designing
C) Software engineering
D) All of the above
Ans : (C)
39. Junk E-mail is also called
A) Spool
B) Spam
C) Spoof
D) Sniffer script
Ans : (B)
40. Mechanism to protect network from outside attack is
A) Anti-virus
B) Firewall
C) Formatting
D) Digital signature
Ans : (B)
41. Which of the following is billionth of a second?
A) Gigabyte
B) Terabyte
C) Microsecond
D) Nanosecond
Ans : (D)
42. Which of the following peripheral devices displays information to a user?
A) Keyboard
B) Monitor
C) Secondary Storage Device
D) Mouse
Ans : (B)
43. What is the permanent memory built into your computer called?
A) RAM
B) ROM
C) CD-ROM
D) CPU
Ans : (B)
44. is the process of carrying out commands.
A) Fetching
B) Storing
C) Decoding
D) Executing
Ans : (D)
45. Which is the part of the computer systems that one can physically touch?
A) Hardware
B) Software
C) Operating systems
D) Data
Ans : (A)
46. Which of the following is not an integral part of computer?
A) UPS
B) Mouse
C) CPU
D) Monitor
Ans : (A)
47. Which of the following terms is just the connection of networks that can be joined together?
A) Internet
B) Intranet
C) Extranet
D) Virtual private network
Ans : (A)
48. is the most important/powerful computer in a typical network.
A) Network station
B) Network server
C) Network client
D) Desktop
Ans : (B)
49. The blinking symbol on the computer screen is called the
A) hand
B) mouse
C) cursor
D) light
Ans : (C)
50. Which one of the following is a key function of a firewall?
A) Moving
B) Deleting
C) Monitoring
D) Copying
Ans : (C)
51. key is the example of Toggle key?
A) Shift
B) Caps Lock
C) Alt
D) Escape
Ans : (B)
52. The of software contains lists of commands and options
A) tool bar
B) title bar
C) menu bar
D) formula bar
Ans : (C)
53. Computations and logical operations are performed by the
A) ALU
B) RAM
C) Control unit
D) Register
Ans : (A)
54. Which format requires fewer conductors?
A) Serial
B) Parallel
C) Perpendicular
D) Both are the same
Ans : (A)

55. An http request contains parts.
A) 1 B) 2 C) 3 D) 4 **Ans : (C)**
56. The number of pixels displayed on a screen is known as the screen
A) refresh rate B) resolution C) viewing size D) colour depth **Ans : (B)**
57. The central processing unit is an example of
A) a program B) software C) hardware D) peripheral **Ans : (C)**
58. The Internet service that provides a multimedia interface to available resources is called
A) Gopher B) Telnet C) FTP D) World Wide Web **Ans : (D)**
59. A byte is a collection of
A) 4 bits B) 6 bits C) 8 bits D) 12 bits **Ans : (C)**
60. What is the permanent memory built into your computer called?
A) RAM B) ROM C) Floppy D) CPU **Ans : (B)**
61. Unsolicited commercial email is commonly known as
A) junk B) hypertext C) spam D) hoaxes **Ans : (C)**
62. The process of a computer receiving information from a server on the Internet is known as
A) pushing B) downloading C) pulling D) transferring **Ans : (B)**
63. Programs or a set of electronic instructions that tell a computer what to do
A) Software B) Hardware C) Menu D) Monitor **Ans : (A)**
64. Each box in a spreadsheet is called a
A) cell B) field C) record D) empty space **Ans : (A)**
65. The simultaneous processing of two or more programs by multiple processors is
A) multitasking B) time sharing C) multi programming D) multiprocessing **Ans : (A)**
66. What is equipment used to capture information and commands?
A) Storage device B) Input device C) Output device D) Telecommunication device **Ans : (B)**
67. A removable magnetic disc that holds information
A) portable B) monitor C) floppy disk D) hard drive **Ans : (C)**
68. The information you put into the computer is called
A) data B) facts C) files D) directory **Ans : (A)**
69. The name of the computer's brain
A) ROM B) CPU C) RAM D) ALU **Ans : (B)**
70. Which of the following is NOT a computer programming language?
A) COBOL B) JAVA C) Microsoft D) C **Ans : (C)**
71. Coded entries which are used to gain access to a computer system are called
A) Codeword's B) Entry codes C) Passwords D) Security commands **Ans : (C)**
72. How many values can be represented by a single byte?
A) 4 B) 16 C) 64 D) 256 **Ans : (D)**
73. devices convert human understandable data and programs into a form that the computer can process.
A) Monitor B) Output C) Input D) Solid state **Ans : (C)**
74. The basic goal of computer process is to convert data into
A) tables B) information C) files D) graphs **Ans : (B)**
75. Manipulating data to create information is known as
A) analysis B) programming C) feedback D) processing **Ans : (D)**
76. Which of the following is the Communication protocol that sets the standard used to every computer that accesses Web based information?
A) HTTP B) DML C) HTML D) XML **Ans : (A)**
77. Telnet is a based computer protocol
A) animation B) sound C) image D) text **Ans : (D)**
78. Codec refers to
A) Coder decoder B) Co-declaration C) Command declaration D) command decoding **Ans : (A)**
79. What menu is selected to print?
A) Tools B) File C) Special D) Edit **Ans : (B)**
80. Desktops and personal computers are also known as
A) servers B) super computers C) mainframes D) micro computers **Ans : (D)**
81. Find the odd one out?
A) INFORMIX B) SYBASE C) C D) ORACLE **Ans : (C)**
82. The Input device that is closely related to a touch screen is the
A) Joystick B) Scanned C) Keyboard D) Light pen **Ans : (D)**

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83. Which of the following hardware components is the most volatile?
 A) ROM B) PROM C) EPROM D) RAM
 Ans : (D)
84. State the valid schema objects.
 A) tables B) views C) indexes D) all the above
 Ans : (D)
85. Software is
 A) peripheral B) equipment C) computer program D) none of these
 Ans : (C)
86. A spiral shape track formatting is present in
 A) floppy disk B) optical disk C) hard disk D) half inch tape cartridge
 Ans : (B)
87. provides a common address space and routes the packets of data across the entire Internet.
 A) TCP B) UDP C) IP D) None of these
 Ans : (C)
88. Which one of the items given below is not an item of the Menu Bar?
 A) tools B) exit C) catalog D) root
 Ans : (D)
89. The first computer mouse is built by
 A) Robert Zawewski B) William English C) Douglas Engelbart D) Daniel Cougher
 Ans : (B)
90. The performs simple mathematics for the CPU.
 A) DIMM B) BUS C) Register D) ALU
 Ans : (D)
91. What is the name of the network topology in which there are bi-directional links between each possible node?
 A) Star B) Mesh C) Tree D) Ring
 Ans : (D)
92. Which of the following statement can be used to construct loop?
 A) FOR END FOR B) DO WHILE END DO C) IF ENDIF D) All the above
 Ans : (D)
93. Who is considered to be The Father of Artificial Intelligence?
 A) Alan Turing B) Allen Newell C) George Boole D) John McCarthy
 Ans : (D)
94. Which of the following command can be used to add records in a database file?
 A) EDIT B) BROWSE C) APPEND D) All the above
 Ans : (D)
95. The various Record sets are
 A) Snapset B) Dynaset C) Forward only D) All the above
 Ans : (D)
96. GCA stands for
 A) Graphic Conversion Assembler B) Graphic Command Assembler C) Graphic Coded Assembler D) None of the above
 Ans : (B)
97. The first movie released in 1982 with terrific computer animation and graphics was
 A) Dark star B) Forbidden planet C) Tron D) Star wars
 Ans : (D)
98. Which of the following is an example of non-volatile memory?
 A) RAM B) ROM C) VLSI D) LSI
 Ans : (B)
99. Identify correct DML statements, are
 A) INSERT B) DELETE C) Both (a) and (b) D) None of the above
 Ans : (C)
100. The word length of a computer is measured in
 A) bytes B) bits C) millimetres D) metres
 Ans : (A)
101. In a Pascal procedure, the parameters are separated by
 A) colon B) comma C) blank space D) semicolon
 Ans : (B)
102. Whose trademark is the operating system UNIX?
 A) Motorola B) Microsoft C) BELL Laboratories D) AshtonTate
 Ans : (C)
103. The character '\n' is known as
 A) string B) new line C) letter n D) none of the above
 Ans : (B)
104. The types of users in UNIX are
 A) file Owner B) group Owner C) system Administrator D) all the above
 Ans : (D)
105. Which of the following colour graphics display adapter has the highest resolution?
 A) HGA B) EGA C) VGA D) CGA
 Ans : (C)
106. The DIR command is used to display
 A) Size of the files B) new line C) File name extension D) All the above
 Ans : (D)
107. A device that converts digital signals to analog signals is
 A) A block B) A packet C) A modem D) Both (B) and (C)
 Ans : (C)
108. VSNL stands for
 A) Videsh Sanchar Nigam Ltd B) Vigam System Nigar Ltd C) Very Soft Network Link D) Very Small Network Link
 Ans : (A)

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