**PLACEMENT QUESTIONS AND ANSWERS**

1) What will you do if your wifi is not working?

Ans)  Test **a** different device. Try another device, such as **a** smartphone or **a** tablet, and see **if** it **will** connect to **WiFi**. ...

 Check **your** router. ...

 Reconnect to **your WiFi**. ...

 Try **a** different Ethernet cable. ...

 Get **a WiFi** extender. ...

 **Troubleshoot WiFi** on **your** devices for Windows and Mac. And I will check whether the DNS is correctly configured or not!!

 Scan for viruses. ...

 Call **your** service provider.

2) Difference between My Sql and No Sql?

Ans) SQL:

* It is Structured Query Language
* It follows RDMS Concept
* It Follows ACID Properties(Atomicity, Consistency, Isolation, Durability)
* In SQL, If traffic is more on single server then we can increase RAM, CPU, SSD etc… so that it can handle the more load
* Used in extent of the companies and having good support
* Best for complex queries

NO SQL:

* It is a Distributed Database
* It doesn’t follow RDMS Concept
* It follows CAP theoram(Consistency, Availbilty, partition)
* In NOSQL, if the traffic is more then we need to distribute or we need establish a new server to handle the load.
* Less Support compared to SQL
* Best for Simple queires.

3) How to train LUIS for air transportation?

Ans) LUIS means Language Understanding Intelligent Service Language Understanding Intelligent Service (LUIS) enables developers to build smart applications that can understand human language and respond accordingly to user requests. kind of human intelligence like understanding language, identifying a picture, predicting — among other mental capabilities — is cognitive intelligence. LUIS is a service developed by Microsoft that has algorithms to understand human language and come up with intents that can be used to execute specific commands/code snippets in the client application.

STEPS TO TRAIN LUIS FOR AIR TRANSPORTATION:

1) Train the Bot to understand the NLP

2) Set the commands to introduce about the bot like Name of the bot

3) Ask for destination to plan and also attributes like filtering of price, date of travel, no of persons to travel, cost of the ticket etc…

4)After successful confirmation of ticket thanking message.

4) What is Network trashing?

Ans) **thrashing** occurs when a computer's virtual memory resources are overused, leading to a constant state of paging and page faults, inhibiting most application-level processing. This causes the performance of the computer to degrade or collapse. ... This condition is referred to as **thrashing**

**5) What is encryption and encapsulation?**

**Ans) Encapsulation** means Wrapping or method in which data is encapsuled into a single frame. and. **Encryption** is the process of transforming information using an algorithm to make it unreadable to anyone except those possessing special knowledge, usually referred to as a key.

6) What is mean by thread?

Ans) A *thread* is a single sequential flow of control within a program.

7) What are multiple threads and threads can be implemented in C++?

Ans) A **multithreaded** program contains two or **more** parts that **can** run concurrently. Each part of such a program is called a **thread**, and each **thread** defines a separate path of execution

there are no limits at your **C++** application level. The number of maximum **thread** is more on the OS level (based on your architecture and memory available

8) How does FTP Works?

Ans) An **FTP** server is a computer program that is built to handle data transfer between computers. **It** allows **the** web pages to transfer to **the** server so that others can access them. Using an **FTP** client we can upload, download, delete, move, rename and copy **the** file on a server.

9) What is the process of the data storage?

Ans) Data processing is the process of data management , which enables creation of valid, useful information from the collected data. Data processing includes classification, computation, coding and updating and storage.

10) Working of DNS?

Ans) DNS means Domain Name System. It is a phone book of internet.

For every brand or company or website there will be a domain name. This domain name when we search it will convert to IP address and it will communicate with the internet through browser and giving the particular address. This is how DNS works.

11) How email works?

Ans) Here we will be using SMTP to send or receive the email. Here we will be setting up client and server and one more client to receive the mail. In this we will setting up the different IP address to each computer and we will be setting up with the help of server using SMTP. So when we compose a mail from one client to another client, it will be first verifying the Domain Name in the internet and if it is there then it will be sending the mail to the destination.

12) Diffrence between IPV4 and IPV6?

Ans) An IP stands for internet protocol. An IP address is assigned to each device connected to a network. Each device uses an IP address for communication.

IPv4 is a version 4 of IP. It is a current version and the most commonly used IP address. It is a 32-bit address written in four numbers separated by 'dot', i.e., periods. This address is unique for each device.

The main difference between IPv4 and IPv6 is the address size of IP addresses. The IPv4 is a 32-bit address, whereas IPv6 is a 128-bit hexadecimal address. IPv6 provides a large address space, and it contains a simple header as compared to IPv4.

Reference: [This is for reference](https://www.javatpoint.com/ipv4-vs-ipv6)

13) Difference between 32bit and 64bit OS?

Ans)  Using 64-bit one can do a lot in multi-tasking, user can easily switch between various applications without any windows hanging problems. 

 Gamers can easily play High graphical games like Modern Warfare, GTA V, or use high-end software like Photoshop or CAD which takes a lot of memory since it makes multi-tasking with big software, easy and efficient for users. However upgrading the [video card](https://en.wikipedia.org/wiki/Video_card) instead of getting a 64-bit processor would be more beneficial.

14) What would you do if your bike doesn’t start?

1. Confirm There's Gas in **the** Tank. ...
2. Engage **the** Clutch. ...
3. Put **the Motorcycle** in (**the** Right) Gear. ...
4. Look for Loose Wires. ...
5. Confirm **the** Kill Switch is Off. ...
6. Ensure **the** Fuel Valve is Set to “On” ...
7. See **if the** Fuel Injection System is Functional.

15) Write a code for tree traversal?

Ans) [Code Here](https://www.geeksforgeeks.org/tree-traversals-inorder-preorder-and-postorder/)

Inorder (Left, Root, Right) :   
(b) Preorder (Root, Left, Right) :   
(c) Postorder (Left, Right, Root) :

16) Code to get the ASCII Value?

Ans) #include <iostream>

using namespace std;

int main()

{

    char c = 'A';

    cout << "The ASCII value of " << c << " is " << int(c);

    return 0;

}

17) What is an IP Address?

Ans) An **IP address** is an **address** used in order to uniquely identify a device on an **IP network**.

18) What is an ER Diagram?

Ans) **ER Diagram** stands for Entity Relationship Diagram, also known as ERD is a diagram that displays the relationship of entity sets stored in a database. In other words, ER diagrams help to explain the logical structure of databases. ER diagrams are created based on three basic concepts: entities, attributes and relationships.

19) If your computer is not switching on, then what will you do?

Ans) Unplug **your computer** and plug it directly into **a** wall outlet **you** know is **working**, rather **than a power** strip or battery backup **that** may be failing. **Make** sure **the power switch** on **the** back **of your power** supply is flipped on, and **if the** outlet is connected to **a** light **switch**, **make** sure **that switch** is turned on too

20) How is Memory allocated in stack/heap?

Ans) **Stack** is used for static **memory allocation** and **Heap** for dynamic **memory allocation**, both stored in the computer's RAM . Variables **allocated** on the **stack** are stored directly to the **memory** and access to this **memory** is very fast.

A **heap** is a general term used for any **memory** that is **allocated** dynamically and randomly; i.e. out of order. The **memory** is typically **allocated** by the OS, with the application calling API functions to do this **allocation**.

21) what is process?

Ans) A Process is nothing but the steps involved in the execution of the program.

22) Write a query to display the descending order of attributes?

Ans) SELECT column-list|\* FROM table-name **ORDER BY ASC | DESC;**

Here ORDER BY is used to ordering the elements

23) What is PolyMorphism, Encapsulation , Data Abstraction?

Ans) **Abstraction** ensures simplicity. Inheritance has to do with methods and functions inheriting the attributes of another class. ... **Polymorphism** allows program code to have different meaning or functions while **encapsulation** is the process of keeping classes private so they cannot be modified by external codes

24) Difference between Procedural Oriented Language and Object Oreinted Language?

Ans)

| **Procedural Oriented Programming** | **Object Oriented Programming** |
| --- | --- |
| In procedural programming, program is divided into small parts called ***functions***. | In object oriented programming, program is divided into small parts called ***objects***. |
| Procedural programming follows ***top down approach***. | Object oriented programming follows ***bottom up approach***. |
| There is no access specifier in procedural programming. | Object oriented programming have access specifiers like private, public, protected etc. |
| Adding new data and function is not easy. | Adding new data and function is easy. |
| Procedural programming does not have any proper way for hiding data so it is ***less secure***. | Object oriented programming provides data hiding so it is ***more secure***. |
| In procedural programming, overloading is not possible. | Overloading is possible in object oriented programming. |
| In procedural programming, function is more important than data. | In object oriented programming, data is more important than function. |
| Procedural programming is based on ***unreal world***. | Object oriented programming is based on ***real world***. |
| Examples: C, FORTRAN, Pascal, Basic etc. | Examples: C++, Java, Python, C# etc. |
|  |  |
|  |  |

25) How to unlock your PC after losing your password and data must not be removed?

Ans) Just install Lazysoft software and insert your ur external pendrive or hard disk and open BIOS Settings and go to CD/ROM option and select and external hard drive and follow the procedure

Reference: [Check it for complete idea](https://www.youtube.com/watch?v=j0_N5gZ-PWs)

26) If you are not able to acces your files in D drive, How will you over come the problem?

Ans) [Check the Video for the solution](https://www.youtube.com/watch?v=cdU5oFaNENI)

27) What is the meaning of ‘.’ In the URL?

Ans) The '.' is like a character which differentiates from the domains. like www.todaysfuture.in the '.' after www means the first domain is done. then it checks the next domain.

The best example is like your email ID first is the email-ID then is the '@' that means the account name is done then comes gmail/yahoo/wtvr then a '.' to finish the account type then '.' com or in depending on the account

Main thing is ‘.’ Acts as delimiter

28) What is Virtual Memory?

Ans) **Virtual memory** is a feature of an operating system that enables a computer to be able to compensate shortages of physical **memory** by transferring pages of data from random access **memory** to disk storage. ... This process allows for **RAM** to be freed up so that a computer can complete **the** task.

29) What is exe no response?

Ans) According to Microsoft experts, this problem occurs due to corrupt registry settings, or system issues due to virus infection or third-party tool installations. Installation of third-party software can change **the** default configuration for running **EXE files**, which often leads to failures when you try to run **EXE files.**

**30)**  How can we block a website to students when they are in labs?

Ans) The simplest way to block a website on your school’s network is with a web monitoring program, which allows you to block individual addresses as well as groups of websites. These programs usually allow you to set up content blocks for access levels. So, for example, you could block more sites for students than for faculty, and perhaps leave an open level of access for administration on top of that.

31) What is CPU Scheduling?

Ans) CPU scheduling is a process that allows one process to use the CPU while the execution of another process is on hold(in waiting state) due to unavailability of any resource like I/O etc, thereby making full use of CPU. The aim of CPU scheduling is to make the system efficient, fast, and fair.

32) What is Cloud Computing?

Ans) cloud computing is the delivery of computing services—including servers, storage, databases, networking, software, analytics, and intelligence—over the Internet (“the cloud”) to offer faster innovation, flexible resources, and economies of scale.

33) Write a code to find the word in the string? (Str.find())

1. Ans) #include<iostream>
2. using namespace std;
3. int main()
4. {
5. string str= "java is the best programming language";
6. cout <<  str<<'\n';
7. cout <<" Position of the programming word is :";
8. cout<< str.find("programming");
9. return 0;
10. }

34) Write a code for Fibonacci Series?

Ans) //Fibonacci Series using Recursion

#include<bits/stdc++.h>

using namespace std;

int fib(int n)

{

    if (n <= 1)

        return n;

    return fib(n-1) + fib(n-2);

}

int main ()

{

    int n = 9;

    cout << fib(n);

    getchar();

    return 0;

}

35) Write a code for Swapping of Numbers?

Ans) #include <iostream>

using namespace std;

int main()

{

int a = 5, b = 10, temp;

cout << "Before swapping." << endl;

cout << "a = " << a << ", b = " << b << endl;

temp = a;

a = b;

b = temp;

cout << "\nAfter swapping." << endl;

cout << "a = " << a << ", b = " << b << endl;

return 0;

}

36) Write a program for checking of prime number?

Ans) // A school method based C++ program to check if a

// number is prime

#include <bits/stdc++.h>

using namespace std;

bool isPrime(int n)

{

// Corner case

if (n <= 1)

return false;

// Check from 2 to n-1

for (int i = 2; i < n; i++)

if (n % i == 0)

return false;

return true;

}

// Driver Program to test above function

int main()

{

isPrime(11) ? cout << " true\n" : cout << " false\n";

isPrime(15) ? cout << " true\n" : cout << " false\n";

return 0;

}

37) Program to check palindrome?

#include <stdio.h>

#include <string.h>

// A function to check if a string str is palindrome

void isPalindrome(char str[])

{

// Start from leftmost and rightmost corners of str

int l = 0;

int h = strlen(str) - 1;

// Keep comparing characters while they are same

while (h > l)

{

if (str[l++] != str[h--])

{

printf("%s is Not Palindrome", str);

return;

}

}

printf("%s is palindrome", str);

}

// Driver program to test above function

int main()

{

isPalindrome("abba");

isPalindrome("abbccbba");

isPalindrome("geeks");

return 0;

}

38) what is exception handling?

Ans) Exception handling refers **to the way that a program handles exceptional circumstances**. It is really important that, when an exception occurs, a program does not just 'crash'. ... It requires you to write an exception handler that will be called and run when an exception is encountered.

39) what is dead lock?

Ans) ***Deadlock*** is a situation where a set of processes are blocked because each process is holding a resource and waiting for another resource acquired by some other process. Consider an example when two trains are coming toward each other on the same track and there is only one track, none of the trains can move once they are in front of each other. A similar situation occurs in operating systems when there are two or more processes that hold some resources and wait for resources held by other(s). For example, in the below diagram, Process 1 is holding Resource 1 and waiting for resource 2 which is acquired by process 2, and process 2 is waiting for resource 1.

40) what is uml diagram?

Ans) The Unified Modeling Language is a general-purpose, developmental, modeling language in the field of software engineering that is intended to provide a standard way to visualize the design of a system

41) What are joints in DBMS?

Ans) **In DBMS, a join statement is mainly used to combine two tables based on a specified common field between them.** If we talk in terms of Relational algebra, it is the cartesian product of two tables followed by the selection operation. Thus, we can execute the product and selection process on two tables using a single join statement. We can use either 'on' or 'using' clause in MySQL to apply predicates to the join queries.

42) What are dbms queires?

Ans) A **query** is a request for data or information from a database table or combination of tables. This data may be generated as results returned by Structured **Query** Language (SQL) or as pictorials, graphs or complex results, e.g., trend analyses from data-mining tools.

43) What are layers in OSI Model?

Ans)  [Physical Layer](https://www.forcepoint.com/cyber-edu/osi-model#featured_section_21196)

 [Data Link Layer](https://www.forcepoint.com/cyber-edu/osi-model#featured_section_21206)

 [Network Layer](https://www.forcepoint.com/cyber-edu/osi-model#featured_section_20616)

 [Transport Layer](https://www.forcepoint.com/cyber-edu/osi-model#featured_section_21221)

 [Session Layer](https://www.forcepoint.com/cyber-edu/osi-model#featured_section_21231)

 [Presentation Layer](https://www.forcepoint.com/cyber-edu/osi-model#featured_section_21241)

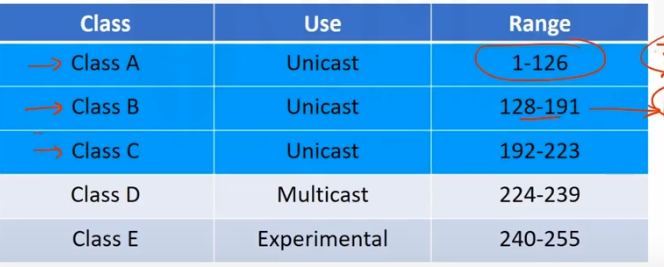
 [Application Layer](https://www.forcepoint.com/cyber-edu/osi-model#featured_section_21251)

44) How to trouble shoot blackscreen?

1. Open Start.
2. Search for msconfig and click the top result to open the System Configuration app.
3. Click the Services tab.
4. Check the Hide all Microsoft services option.
5. Check one of the services. ...
6. Click the Apply button.
7. Click the OK button.
8. Restart the computer.

45) What are the classes of IP address?

Ans) Class A, Class B, Class C, Class D, Class E

Ans) Class A, Class B, Class C, Class D, Class E

46) What is Networking?

Ans) Networking is **the exchange of information across the multiple devices connected to internet**

**47) what is hub in networking?**

**Ans)** A hub is **a physical layer networking device which is used to connect multiple devices in a network**. They are generally used to connect computers in a LAN. A hub has many ports in it

48) what is a switch in networking?

Ans) A **network switch** is [networking hardware](https://en.wikipedia.org/wiki/Networking_hardware) that connects devices on a [computer network](https://en.wikipedia.org/wiki/Computer_network) by using [packet switching](https://en.wikipedia.org/wiki/Packet_switching) to receive and forward data to the destination device.

49) what is tcp and udp?

Ans) **TCP is a connection-oriented protocol, whereas UDP is a connectionless protocol**. A key difference between TCP and UDP is speed, as TCP is comparatively slower than UDP. Overall, UDP is a much faster, simpler, and efficient protocol, however, retransmission of lost data packets is only possible with TCP.

50) What is PoP?

Ans) A point of presence (PoP) is a [demarcation point](https://getvoip.com/library/what-is-demarcation-point/), access point, or physical location at which two or more networks or communication devices share a connection.

51) what is smtp in networking?

Ans) SMTP is used to send and receive email. SMTP is **part of the application layer of the TCP/IP protocol**. Using a process called “store and forward.

52) what is dhcp in networking?

Ans) A DHCP Server is a network server that automatically provides and assigns IP addresses, default gateways and other network parameters to client devices. It relies on the standard protocol known as **Dynamic Host Configuration Protocol**

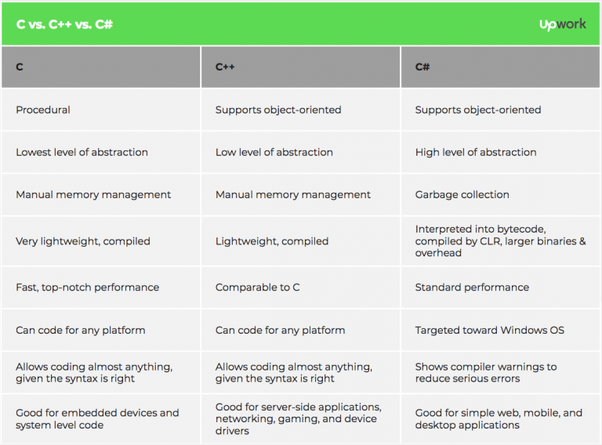
**53) what is mac in networking?**

**Ans)** A **media access control address** (**MAC address**) is a [unique identifier](https://en.wikipedia.org/wiki/Unique_identifier) assigned to a [network interface controller](https://en.wikipedia.org/wiki/Network_interface_controller) (NIC) for use as a [network address](https://en.wikipedia.org/wiki/Network_address) in communications within a network segment.

54) How is WAMP useful?

Ans) WAMP serves the exact same functions that XAMPP does. When you install WAMP, it **automatically installs the Apache server, MySQL database, and PHP language** on your local machine

55) Difference between C, C++, C#?



56) What is an IP Address?

Ans) An IP address is a unique address that identifies a device on the internet or a local network. IP stands for "Internet Protocol," which is the set of rules governing the format of data sent via the internet or local network.

57) What is an exception and exception handling?

Ans) Exception is nothing but transferring control of one part of program to another. Exception Handling is nothing but to handle the run time errors.

58) what is virtual space address?

Ans) The virtual address space for a process is the set of virtual memory addresses that it can use. The address space for each process is private and cannot be accessed by other processes unless it is shared.

59) Explain about azure?

Ans) Azure is **a public cloud computing platform**—with solutions including Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS) that can be used for services such as analytics, virtual computing, storage, networking, and much more.

60) Explain about file system?

Ans) A file system is **a process that manages how and where data on a storage disk**, typically a hard disk drive (HDD), is stored, accessed and managed.

61) Explain about NTFS?

Ans) NT file system (NTFS), which is also sometimes called the New Technology File System, is **a process that the Windows NT operating system uses for storing, organizing, and finding files on a hard disk efficiently**.

62) what is subnet and supernet?

Ans) Subnetting is **the procedure to divide the network into sub-networks**. While supernetting is the procedure of combine the small networks

63) What is 555 timer IC?

Ans) The **555 timer IC** is an [integrated circuit](https://en.wikipedia.org/wiki/Integrated_circuit) (chip) used in a variety of [timer](https://en.wikipedia.org/wiki/Timer), delay, pulse generation, and [oscillator](https://en.wikipedia.org/wiki/Electronic_oscillator) applications.

64) what is 8085 microprocessor?

Ans) 8085 is pronounced as "eighty-eighty-five" microprocessor. It is an 8-bit microprocessor designed by Intel in 1977 using NMOS technology. It is used **in washing machines, microwave ovens, mobile phones, etc**.

65) what is ccn?

Ans) **content centric networking** (CCN) emphasizes content by making it directly addressable and routable CCN is characterized by the basic exchange of content request messages (called "Interests") and content return messages (called "Content Objects").

66) What is protocol explain?

Ans) A protocol is **a set of rules and guidelines for communicating data**. Rules are defined for each step and process during communication between two or more computers.

67) Pointer to an array C++ Program?

Ans) #include <iostream>

using namespace std;

int main()

{

int arr[5] = { 1, 2, 3, 4, 5 };

int \*ptr = arr;

cout <<"\n"<< ptr;

return 0;

}

68) What is lexical Analyser?

Ans) Lexical Analysis is the first phase of the compiler also known as a scanner. It converts the High level input program into a sequence of **Tokens**.

* Lexical Analysis can be implemented with the [Deterministic finite Automata](https://www.geeksforgeeks.org/introduction-of-finite-automata/).
* The output is a sequence of tokens that is sent to the parser for syntax analysis

69) when an object is pointing to a class in c++, what is the memory allocated in bits?

Ans) Size of all data members

70) Command Line arguments wrt main function?

Ans) The arguments for main allow convenient command-line parsing of arguments. The types for argc and argv are defined by the language. The names argc and argv are traditional, but you can name them whatever you like.

The argument definitions are as follows:

*argc*  
An integer that contains the count of arguments that follow in *argv*. The *argc* parameter is always greater than or equal to 1.

*argv*  
An array of null-terminated strings representing command-line arguments entered by the user of the program. By convention, argv[0] is the command with which the program is invoked. argv[1] is the first command-line argument. The last argument from the command line is argv[argc - 1], and argv[argc] is always NULL.

71) Recursive Program?

Ans) #include<bits/stdc++.h>

using namespace std;

void rec(int test)

{

if(test < 1)

return;

else{

cout<<test<<"";

rec(test - 1);

cout<< test << " ";

return;

}

}

int main()

{

int test = 3;

rec(test);

}

72) Inheritance Concept and Program?

Ans)  The capability of a class to derive properties and characteristics from another class is called **Inheritance**. Inheritance is one of the most important feature of Object Oriented Programming.   
**Sub Class:** The class that inherits properties from another class is called Sub class or Derived Class.   
**Super Class:**The class whose properties are inherited by sub class is called Base Class or Super class.

// C++ program to demonstrate implementation

// of Inheritance

#include <bits/stdc++.h>

using namespace std;

//Base class

class Parent

{

public:

int id\_p;

};

// Sub class inheriting from Base Class(Parent)

class Child : public Parent

{

public:

int id\_c;

};

//main function

int main()

{

Child obj1;

// An object of class child has all data members

// and member functions of class parent

obj1.id\_c = 7;

obj1.id\_p = 91;

cout << "Child id is " << obj1.id\_c << endl;

cout << "Parent id is " << obj1.id\_p << endl;

return 0;

}

73) what is normalization in dbms?  
Ans) Normalization is **the process of organizing the data in the database**. ... Normalization divides the larger table into the smaller table and links them using relationship. The normal form is used to reduce redundancy from the database table.

|  |  |
| --- | --- |
| [1NF](https://www.javatpoint.com/dbms-first-normal-form) | A relation is in 1NF if it contains an atomic value. |
| [2NF](https://www.javatpoint.com/dbms-second-normal-form) | A relation will be in 2NF if it is in 1NF and all non-key attributes are fully functional dependent on the primary key. |
| [3NF](https://www.javatpoint.com/dbms-third-normal-form) | A relation will be in 3NF if it is in 2NF and no transition dependency exists. |
| [4NF](https://www.javatpoint.com/dbms-forth-normal-form) | A relation will be in 4NF if it is in Boyce Codd normal form and has no multi-valued dependency. |
| [5NF](https://www.javatpoint.com/dbms-fifth-normal-form) | A relation is in 5NF if it is in 4NF and not contains any join dependency and joining should be lossless. |

74) Joints in DBMS?

Ans) A join is **an SQL operation performed to establish a connection between two or more database tables based on matching columns**, thereby creating a relationship between the tables. Most complex queries in an SQL database management system involve join commands.

75) What is linked list?

Ans) A linked list is a linear data structure, in which the elements are not stored at contiguous memory locations. The elements in a linked list are linked using pointers. In simple words, a linked list consists of **nodes where each node contains a data field and a reference(link) to the next node in the list**.

76) What is Polymorphism?

Ans) Polymorphism is a feature of object-oriented programming languages that **allows a specific routine to use variables of different types at different** times. Polymorphism is the ability of a programming language to present the same interface for several different underlying data types.

77) What is Two Dimensional array?

Ans) A two-dimensional array in C can be thought of as **a matrix with rows and columns**. The general syntax used to declare a two-dimensional array is: A two-dimensional array is an array of several one-dimensional arrays. Following is an array with five rows, each row has three columns: int my\_array[5][3];

78) What is ML and how it is different from other languages?

Ans) ML can be referred to as an **impure functional language**, because although it encourages functional programming, it does allow side-effects (like languages such as Lisp, but unlike a purely functional language such as Haskell). ... Thus one can create and use infinite streams as in Haskell, but their expression is indirect.

79) where is int a , int b and int c is stored?

Ans) Integers are commonly stored using **a word of memory**, which is 4 bytes or 32 bits, so integers from 0 up to 4,294,967,295 (232 - 1) can be stored. Below are the integers 1 to 5 stored as four-byte values (each row represents one integer).

80) Binary Search

Ans)

def binary\_search(arr, low, high, x):

# Check base case

if high >= low:

mid = (high + low) // 2

# If element is present at the middle itself

if arr[mid] == x:

return mid

# If element is smaller than mid, then it can only

# be present in left subarray

elif arr[mid] > x:

return binary\_search(arr, low, mid - 1, x)

# Else the element can only be present in right subarray

else:

return binary\_search(arr, mid + 1, high, x)

else:

# Element is not present in the array

return -1

# Test array

arr = [ 2, 3, 4, 10, 40 ]

x = 10

# Function call

result = binary\_search(arr, 0, len(arr)-1, x)

if result != -1:

print("Element is present at index", str(result))

else:

print("Element is not present in array")

81) Bubble Sort?

Ans) # Python program for implementation of Bubble Sort

def bubbleSort(arr):

n = len(arr)

# Traverse through all array elements

for i in range(n-1):

# range(n) also work but outer loop will repeat one time more than needed.

# Last i elements are already in place

for j in range(0, n-i-1):

# traverse the array from 0 to n-i-1

# Swap if the element found is greater

# than the next element

if arr[j] > arr[j + 1] :

arr[j], arr[j + 1] = arr[j + 1], arr[j]

# Driver code to test above

arr = [64, 34, 25, 12, 22, 11, 90]

bubbleSort(arr)

print ("Sorted array is:")

for i in range(len(arr)):

print ("% d" % arr[i]),