Mphasis Interview Questions for Freshers

Mphasis Technical Interview Questions for Freshers

Mphasis Technical Interview Question & Answers

1. Give an example program of the While loop

```
#include <iostream.h>

int main()

{

int n;

cout<<"Enter the number : ";

cin>>n;

while(n>0)

{

cout<<" "<<n;

--n;

}

cout<<"While loop complete";

}
```

2. Can we access the array using a pointer in C language?

Yes, by holding the base address of the array into a pointer, we can access the array using a pointer.

3. What is the use of the function in C?

- C functions are used to avoid rewriting the same code again and again in our program.
- C functions can be called any number of times from any place of our program.

- When a program is divided into functions, then any part of our program can easily be tracked.
- C functions provide the reusability concept, i.e., it breaks the big task into smaller tasks so that it makes the C program more understandable. Copyright to https://www.freshersnow.com/

4. What is pointer to pointer in C?

In the case of a pointer to pointer concept, one pointer refers to the address of another pointer. The pointer to pointer is a chain of pointers. Generally, the pointer contains the address of a variable. The pointer to pointer contains the address of a first pointer.

5. What will be the output of the following code?

```
#include <iostream>

class A {

public:

A() {}

~A() {

throw 42;

}

};

int main(int argc, const char * argv[]) {

try {

A a;

throw 32;

} catch(int a) {

std::cout << a;

}}
```

Output - This set of code if runs then it will crash or stop as it will throw 32 error as class A is a destroyer and will throw another exception while exception handling which will cause the program to crash.

6. Explain the concept of constructor overloading

Constructor overloading is the process of creating multiple constructors in the class consisting of the same name with a difference in the constructor parameters. Depending upon the number of parameters and their corresponding types, distinguishing the different types of constructors is done by the compiler.

7. What do you understand by marker interfaces in Java?

Marker interfaces, also known as tagging interfaces are those interfaces that have no methods and constants defined in them. They are there for helping the compiler and JVM to get run time-related information regarding the objects.

8. What do you mean by an interface in Java?

An interface in Java is a blueprint of a class or you can say it is a collection of abstract methods and static constants. In an interface, each method is public and abstract but it does not contain any constructor. Thus, interface basically is a group of related methods with empty bodies. Check the below example.

public interface Animal

{

public void eat();

public void sleep();

public void run();

}

9. What is Join?

The Join operation is one of the most useful activities in relational algebra. It is the most commonly used way to combine information from two or more relations. A Join is always performed on the basis of the same or related column. Most complex queries of SQL involve the JOIN command.

- Inner Joins
- Outer Joins

10. Describe the types of keys?

- **Primary key:** The Primary key is an attribute in a table that can uniquely identify each record in a table. It is compulsory for every table.
- **Candidate key:** The Candidate key is an attribute or set of an attribute that can uniquely identify a tuple. The Primary key can be selected from these attributes.
- **Super key:** The Super key is a set of attributes that can uniquely identify a tuple. The super key is a superset of the candidate key. Copyright to https://www.freshersnow.com/
- **Foreign key:** The Foreign key is a primary key from one table, which has a relationship with another table. It acts as a cross-reference between tables.

11. What are the integrity rules in DBMS?

Data integrity is one significant aspect while maintaining the database. So, data integrity is enforced in the database system by imposing a series of rules. Those set of integrity is known as the integrity rules.

There are two integrity rules in DBMS:

- **Entity Integrity:** It specifies that the "Primary key cannot have a NULL value."
- **Referential Integrity:** It specifies that "Foreign Key can be either a NULL value or should be the Primary Key value of other relation

12. What are some common clauses used with SELECT query in SQL?

Some common SQL clauses used in conjuction with a SELECT query are as follows:

- **WHERE clause** in SQL is used to filter records that are necessary, based on specific conditions.
- **ORDER BY clause** in SQL is used to sort the records based on some field(s) in ascending (ASC) or descending order (DESC).
- **GROUP BY clause** in SQL is used to group records with identical data and can be used in conjunction with some aggregation functions to produce summarized results from the database.
- **HAVING clause** in SQL is used to filter records in combination with the GROUP BY clause. It is different from WHERE, since the WHERE clause cannot filter aggregated records.

13. What are proxy servers, and how do they protect computer networks?

Proxy servers primarily prevent external users who are identifying the IP addresses of an internal network. Without knowledge of the correct IP address, even the physical location of the network cannot be identified. Proxy servers can make a network virtually invisible to external users.

14. What is the main purpose of OSPF?

OSPF, or Open Shortest Path First, is a link-state routing protocol that uses routing tables to determine the best possible path for data exchange.

15. Tell me something about Virtual Private Network

VPN or the Virtual Private Network is a private WAN (Wide Area Network) built on the internet. It allows the creation of a secured tunnel (protected network) between different networks using the internet (public network). By using the VPN, a client can connect to the organization's network remotely.

16. What is the ICMP protocol?

ICMP is the Internet Control Message Protocol. It is a network layer protocol used for error handling. It is mainly used by network devices like routers for diagnosing the network connection issues and is crucial for error reporting and testing if the data is reaching the preferred destination in time. It uses port 7 by default.

17. What are the advantages of a Linked List over an array?

- The size of a linked list can be incremented at runtime which is impossible in the case of the array.
- The List is dynamically stored in the main memory and grows as per the program demand while the array is statically stored in the main memory, the size of which must be declared at compile time.
- The number of elements in the linked list is limited to the available memory space while the number of elements in the array is limited to the size of an array.
- The List is not required to be continuously present in the main memory, if the contiguous space is not available, the nodes can be stored anywhere in the memory connected through the links.

18. In an AVL tree, at what condition the balancing is to be done?

If the pivotal value (or the Height factor) is greater than 1 or less than -1.

19. What is hashmap in data structure?

Hashmap is a data structure that uses the implementation of hash table data structure which allows access of data in constant time (O(1)) complexity if you have the key.

20. What are the basic clouds in cloud computing?

There are three basic clouds in cloud computing:

- Professional cloud
- Personal cloud
- Performance cloud

21. What is the difference between cloud computing and mobile computing?

Mobile computing and cloud computing are slightly the same in concept. Mobile computing uses the concept of cloud computing. Cloud computing provides users the data which they required while in mobile computing, applications run on the remote server and give users access for storage and management. Copyright to https://www.freshersnow.com/

22. What are serverless components in cloud computing?

- Serverless components in cloud computing allow the building of applications to take place without the complexity of managing the infrastructure. One can write code without having provision to a server.
- Serverless machines take care of virtual machines and container management. Multithreading, hardware allocating are also taken care of by the serverless components.

23. What is the time-sharing system?

Time-sharing is a logical extension of multiprogramming. The CPU performs many tasks by switches that are so frequent that the user can interact with each program while it is running. A time-shared operating system allows multiple users to share computers simultaneously.

24. What do you mean by process synchronization?

Process synchronization is basically a way to coordinate processes that use shared resources or data. It is very much essential to ensure synchronized execution of cooperating processes so

that will maintain data consistency. Its main purpose is to share resources without any interference using mutual exclusion. There are two types of process synchronization - Independent Process, Cooperative Process

25. How does dynamic loading aid in better memory space utilization?

With dynamic loading, a routine is not loaded until it is called. This method is especially useful when large amounts of code are needed in order to handle infrequently occurring cases such as error routines.

Mphasis HR Interview Questions for Freshers

Mphasis HR Interview Questions with Answers

1. Introduce Yourself

The aspirants should start from their present academic qualifications, the city they came from, family details, achievements in the academic year, internships they have done to gain the industrial experience, projects they have done and certifications they have completed out of interest, etc., try to project yourself as an interesting person who is passionate and ambitious. Make sure you maintain clarity of thought in things you are saying and most importantly answer this question in such a way that you can control the next question the interviewer may ask. Because the interviewers will generally like to point out the things you said and question you next about it.

2. Can you tell me what you know about Mphasis

Before appearing for the interview it is necessary for you guys to study a little about the company you are applying for. So, whenever the interviewer pops these types of questions it doesn't surprise you and make you look caught off-guard. To answer this question, you can talk about the Inception of Mphasis (When it has started & By Whom), the Achievements the Company has made since then, The present CEO, Valuation of the Company or any recent news article that is written regarding the company, etc., All this shows how much of interest you have shown in knowing about the company you wish to join.

3. Are you aware of the collaboration of companies with Mphasis?

As previously explained, knowing a little about the company you wish to join is mandatory while appearing for the interview. You have to be aware of little titbits about the Mphasis Competitors, Mphasis Collaborators, Partners, Alliances the company has with others, etc. And coming to list

of collaboration of companies with Mphasis - Adobe, Amazon Web Services, apigee, A & G Health care, Cloudera, Bitfury. So, make sure you guys list out some of these companies' names to show your awareness and knowledge about the recent happenings with the company.

4. Are you flexible for any shifts

Working in IT is all about working in rotational shifts, there is no standard that employees will be working only for the day shift. As an individual, you should be ok with what your work demands be it working on a day or at night, you should be flexible either way. And if in case you are having an issue working at a particular shift you can convey the same at the time of the interview. Don't just say yes to gain employment. Always be genuine while conveying your concerns to the interviewer.

5. Do you know which domains Mphasis is working on?

Having knowledge about Domains or Technology that Mphasis is currently working on will be an added advantage for the candidates. As for the current domains, Mphasis is focussed on core domains like - Banking, Insurance, and Capital Markets. Do make a note to read the newspaper articles or business columns about Mphasis to be up to date with regards to the company you are looking forward to joining.

6. Are you ready to relocate anywhere in India?

Not everyone will be ok with relocation but again you can't say no if your work demands. Employers will generally like to select candidates who are flexible and won't have too many concerns to say yes. They know that it won't be easy to shift to an entirely new city but your willingness shows that you are open to challenges and willing to take chances to grow in your career at any place. So, ensure you kindly convey your acceptance/ resistance for the same to the interviewer.

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