

Accenture Interview Questions



About the company: Accenture

Accenture is one of the global leading professional services and management consulting company. It provides various types of services, strategies for solving the client challenges, digital technology, and operational services. Accenture creates innovation for the world.

Accenture is in the list of A Fortune 500 global company, with proficiency across more than 40 industries and all type of business functions. It was founded in 1989 and has more than 425,000 employees across the world. It is **headquartered in Dublin**, Ireland. The current CEO of this company is **Pierre Nanterme**.

Accenture Recruitment Process

Accenture Company is well known for recruiting worth candidates. So, Accenture conducts a conscientious recruiting process. There are several rounds conducted during the complete recruitment process. Before going for an interview with Accenture, you must go through the official Accenture website to get a detailed knowledge of the company.

There are mainly three rounds in Accenture interview:

In Accenture recruitment process, the candidates have to go through the following rounds:

1. Aptitude/Verbal ability round/Written Round
2. Technical Interview Round
3. HR round

First Round: Accenture Written Round



The first round for Accenture recruitment process is written round **having three different sections** that are **analytical aptitude, verbal ability and attention** to detail. In this round, you will get 55 total number of questions and time duration will be total 60 minutes.

Second Round: Technical Interview Round

The second round for Accenture recruitment process is **technical interview round**. In this round, candidate has to face questions based on **programming concepts for different technologies like C, C++, Java, etc.** In this round, candidate has to show his technical skills.



Third Round: HR Round

HR round is the last round of the Accenture recruitment process. In this round, Interviewer checks the communication and professional skills of the candidate.

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Accenture First Round: English Interview Questions

1) Rohan will be there _____ Sunday and Monday.

- a. For
- b. Until
- c. During
- d. After

Show Answer

2) The sun rose _____ the horizon in the east.

- a. Over
- b. Above
- c. In
- d. Below

Show Answer

3) The baseball game was cancelled _____ the rain.

- a. Due to
- b. Because of
- c. By
- d. None of the above

Show Answer

4) I have been working here _____ five years.

- a. Since
- b. From

- c. For
- d. None of the above.

Show Answer

5) Cat spilled_____ milk all over the floor.

- a. AN
- b. A
- c. The
- d. None of the above.

Show Answer

6) Alina was punished for_____ her official work

- a. Slowing
- b. Avoiding
- c. Postponing
- d. Shrinking

Show Answer

7) Which is the correctly spelled word in the following:

- a. Excessive
- b. Exccessive
- c. Exxcusive
- d. Excesive

Show Answer

8) Catching the earlier train will give us the to do some shopping for the home.

- a. Chance
- b. Possibility
- c. Occasion
- d. Luck

Show Answer

9) This train travels from Delhi_____ Orissa.

- a. At
- b. To
- c. Over
- d. below

Show Answer

Accenture First Round: Quantitative Aptitude Questions

1) A teacher can divide his class into groups of 7, 11 and 15. Find the smallest possible strength of the class?

- a. 965
- b. 1250
- c. 1155

d. 1250

Show Answer

2) A lady purchased a bag for Rs.500 and sold it at a gain of 25% of the selling price. The selling price of the bag is:

a. 425

b. 575

c. 625

d. 475

Show Answer

3) The average weight of a class of 20 students is 35kgs. If the weight of the teacher is also included with the class weight, the average weight increases by 1kg. What is the weight of the teacher?

a. 60kgs

b. 51kgs

c. 56kgs

d. NONE OF THEM

Show Answer

4) A fort has enough food for 35 days for 120 soldiers. If after 15 days 70 soldiers leave the fort, for how many more days the food will last?

a. 68

b. 48

c. 58

d. 70

Show Answer

5) A train 150 meters long passes an electric pole in 15 seconds and another train of same length traveling in opposite direction in 5 seconds. The speed of the second train is

a. 35m/sec

b. 40m/sec

c. 32m/sec

d. 50m/sec

Show Answer

6) When Mohan was born, his father was 32 years older than his brother, and his mother was 25 years older than his sister. If Mohan's brother is 6 years older than Mohan and his mother is 3 years younger than his father, how old was Mohan's sister when Mohan was born?

a. 5 years

b. 10 years

c. 8 years

d. None of the above

Show Answer

7) If the radius of a circle is increased by 10% then the area is increased by:

a. 22%

b. 100%

c. 110%

d. 21%

Show Answer

8) One pipe can fill a tank four times as fast as another pipe. If together the two pipes can fill the tank in 40 minutes, then the slower pipe alone will be able to fill the tank in:

- a. 120 min
- b. 8 min
- c. 200 min
- d. 192 min.

Show Answer

9) Ravi's father said to Ravi, "I was as old as you are at present at the time of your birth." If the father's age is 40 years now, the son's age six years back was:

- a. 14 years
- b. 19 years
- c. 33 years
- d. 38 years

Show Answer

10) A alone can do a piece of work in 8 days and B alone in 6 days. A and B undertook to do it for Rs.4600. With the help of C, they finished the work in 3 days. What is the share of C?

- a. 587
- b. 575
- c. 750
- d. 650

Show Answer

Accenture First Round: Reasoning Questions

1) If Ramesh ranks 14th in a class of 26, then what is his rank from the last?

- a. 13
- b. 15
- c. 14
- d. 12

Show Answer

2) Choose the below option which is suitable for the given Statement and conclusion:

Statement

Some pens are pencil. All pencil are chairs some chairs are tables

Conclusions

- I. Some pens are chairs
- II. Some chairs are pens
- III. All tables are chairs
- IV. Some tables are chairs

- a. All follow
- b. Only I,II, and III follow
- c. Only I,II, and IV follow

- d. Only I,III, and IV follow

Show Answer

3) If * stands for /, / stands for -, + stands for * and -stands for +, then $9/8*4+5-10=?$

- a. 13
- b. 9
- c. 10
- d. 1

Show Answer

4) If a, b, and c are consecutive negative integers, and if $a > b > c$, which of the following must be a positive odd integer?

- a. abc
- b. $(a-b)(b-c)$
- c. $a-bc$
- d. $a(b+c)$

Show Answer

5) FBG, GBF, HBI, IBH, ____

- a. JBK
- b. HBL
- c. HBK
- d. JBI

Show Answer

6) Find the odd value 7,13,19,25,30,37,43

- a. 13
- b. 19
- c. 30
- d. 37

Show Answer

7) If QUESTION = DOMESTIC then what will be the equivalent code for RESPONSE?

- a. OMESUCEM
- b. OMESICSM
- c. OMESICEM
- d. OMESISCM

Show Answer

8) SCD, TEF, UGH, ____, WKL

- a. CMN
- b. UJI
- c. VIJ
- d. IJT

Show Answer

9) Find the next term of series 24 28 36 52 84 ?

- a. 144
- b. 135
- c. 148
- d. 140
- e. None of these

Show Answer

10) Introducing a man to her husband, Reena said, "His brother's father is the only son of my grandfather." How is the Reena related to this man?

- a. Mother
- b. Aunt
- c. Sister
- d. Daughter
- e. Grandmother

Show Answer

Accenture Second Round: Technical Interview Questions

Java Interview questions:

1) Why is Java called platform independent?

Java is platform independent that means we can execute our code in any operating system either it is mac, Window or Linux. Java is Platform independent because when we write code, then its compiler converts it into bytecode and this bytecode can be executed on any platform (JDK should be installed in that OS).

2) What do you understand by Exception Handling?

Exception handling is a process of handling exceptions occurs during the execution of a program. Due to the occurrence of exception, execution of programs get halted, so it is very important to handle these exceptions so that program can be executed smoothly. We can handle the exceptions by using five keywords: try, catch, throw, throws, and finally.

3) What is checked and unchecked exception?

- **Checked exception:** If the exception occurs or checked at compile time during the execution of a program, it is called as the checked exception. We should handle these exceptions using try-catch block or using throws keyword. E.g., if someone tries to read a file which is not present then it will throw a checked exception at compile time `FileNotFoundException`
- **Unchecked exceptions:** If the exception is not checked at compile time and occurred at runtime then this type of exception is called an unchecked exception. This type of exceptions occur due to an error in the logic of the code. If we do not handle this type of exception then also compiler will not give a compilation error. E.g. `ArithmeticException`

4) What are the reasons behind the occurrence of an exception?

Following are the reasons behind the occurrence of an exception:

- Accessing a file, which does not exist
- Dividing a variable by zero
- Inserting an element in the array outside the range
- If throw statement occurs
- Abnormal execution condition captured by JVM

5) What is OOP concept?

OOP stands for Object-Oriented Programming. Object-Oriented Programming is a coding practice which works with objects and class. Java is one of the programming languages which is based on these concepts. The basic OOP concepts are:

- Object
- Class
- Inheritance
- Polymorphism
- Abstraction
- Encapsulation

6) Explain the basic features of OOPs.

Following are the basic features of OOPs:

- **Object:** - An object is a physical entity which has a state and behaviour. It occupies space in memory. It is a sample of a class. Object helps to access the methods and variables in the program.
- **Class** - A Class is "collection of objects." A class is a logical entity, which does not take any space. A class includes all the data and methods which shows the behaviour of an object.
- **Inheritance** - Inheritance is a process by which one class can have all properties of other class. Inheritance increases the code reusability. There are two terms used
 - **Child class (Subclass):** Class which inherits other class, called as Child class or derived class.
 - **Parent class (Superclass):** A class which got inherited by another class is termed as parent class or Base class.
- **Polymorphism:** - Polymorphism is a method of performing "a single task in different ways." Polymorphism enables a programmer to use methods or operators in different ways. In Java, we use method overloading and overriding to obtain the polymorphism.
- **Abstraction:** If we show only functionality and hide the explanations or details then this process is called as Abstraction. For achieving the abstraction, we use two ways in Java
 - Abstract class
 - Interface
- **Encapsulation:** Encapsulation is a process of enclosing the data and code together to form a single unit. It makes the data safer within the code for any modification. For achieving the encapsulation, we can declare the data variables of class as private.

7) Differentiate between class and object.

The class and object both are the features of OOPs concepts. The basic differences between both features are given below:

- The Class is a logical entity whereas Object is a physical quantity.
- Class does not occupy memory at the time of creation whereas Object occupied space in memory when it is created.
- For declaring a class, we use a 'class' keyword followed by a class name, whereas we can create the object using the 'new' keyword in Java.
- A Class is like a factory which generates object and object are the instances of the class.

8) What is encapsulation in Java?

Encapsulation is a process of enclosing the data and code together to form a single unit. The best example to understand the encapsulation is a capsule which contains the medicine in it.

- If we declare all the data members of the class as private, then it is called a fully encapsulated class in Java, and then we can use getter and setter method to access it.
- One of the examples of the fully encapsulated class is Java Bean class.
- Encapsulation keeps its data hide from other class hence it is also called as data-hiding.

Example for encapsulation:


```
class EncapsulationEg{
    private String empname;
    private int empage;
    private int empid;

    public String getEmpName() //getter method
    {
        return empname;
    }
    public int getEmpAge()
    {
        return empage;
    }
    public int getEmpId()
    {
        return empid;
    }
    public void setEmpName(String setvalue) //setter methods
    {
        empname=setvalue;
    }
    public void setEmpAge(int setvalue){
        empage=setvalue;
    }
    public void setEmpId(int setvalue){
        empid=setvalue;
    }
}

public class TestEncapsulation{
    public static void main(String args[]){

        EncapsulationEg en= new EncapsulationEg();
        en.setEmpName("Alvin");
        en.setEmpAge(22);
        en.setEmpId(12568);
        System.out.println("Employee Name: " +en.getEmpName());
        System.out.println("Employee Age: " +en.getEmpAge());
        System.out.println("Employee ID: " +en.getEmpId());
    }
}
```

Output:

```
Employee Name: 22
Employee Age: 22
Employee ID: 12568
```

9) What is Recursion and recursive function in Java?

Recursion is a process of calling a method by itself continuously till not get termination point. A method which calls itself is called as a recursive method.

Syntax:

```
Return-type method_name()
```

```
{
// Code to be executed
method_name(); // same name of calling method }
```

10) How can you differentiate between C, C++, and Java?

There are the following differences between the C, C++, and Java language.

Index	C language	C++	Java
1.	C language is a procedural language.	C++ is an object-oriented language.	Java is also an object-oriented language (not pure as it also supports primitive data types).
1.	C language is platform dependent.	C++ is platform dependent.	Java is platform independent language.
1.	C language supports pointers.	C++ language also supports pointers.	Java does not support pointers.
1.	We cannot create our own package in C language	In C++ language also, we cannot create our package.	In the Java language, we can create our package and can specify the classes.
1.	In C, there is no any concept of inheritance.	In C++, we can use multiple inheritance.	Java does not support multiple inheritance.

11) What do you understand by runtime polymorphism?

Polymorphism is a method of performing "a single task in different ways." Polymorphism is of two types

1. Runtime Polymorphism
2. Compile-time polymorphism

Here we will discuss runtime polymorphism.

Runtime Polymorphism- We can achieve runtime Polymorphism by method overriding in Java. And method overriding is a process of overriding a method in the subclass which is having the same signature as that of in superclass.

```
class A{ //Superclass
void name()
{
System.out.println("this is student of Superclass");
}
}

class Student extends A //Subclass
{
void name(){ // method Override with same signature(runtime polymorphism)
System.out.println("this is student of subclass");
}

public static void main (String[] args) {
A a= new A(); // refrence of A class
A b= new Student(); // refrence of student class

a.name();
b.name();
}
}
```

Output:

```
this is student of Superclass
this is student of subclass
```

12) How can you differentiate between method overloading and method overriding?

No.	Method overloading	Method overriding
1.	The process of calling two methods having the same name with different parameters is called method overloading (in the same class)	The process of calling two methods, one in the subclass and other in the superclass, having the same signature is called as method overriding.
2.	It can be accessed within a class.	Method overriding requires two classes to be accessed which having IS-A relationship.
3.	Return type may be changed or may remain same with different parameters	Return type should be the same for both methods.
4.	Method overloading is a concept of compile-time polymorphism.	Method overriding is a concept of method overriding.
5.	e.g. class A{ void m1() {// codes.....} Void m1 (int a) { //code.....}	e.g. class A { void m1(){ // code.....} } Class B extends A{ Void m1(){ // code.....}

13) What are the keyword "super" and "this" in Java?

super keyword: "super" is a keyword in Java which is used to give reference to the object of parent class. "super" keyword cannot be used as an identifier as it is reserved keyword in Java.

this Keyword: "this" keyword in Java is used to refer to the object of the current class. The 'this' keyword cannot be used as an identifier as it is a reserved keyword in Java.

14) What is an interface in Java? Can we implement multiple interfaces in one class?

Interface in Java is a way to achieve the abstraction. The Interface is like a class but not exactly as Interface also can have methods and variable as the class does but Interface only contain method signature does not have the body.

- The Interface cannot be instantiated in Java.
- The Interface contains methods which are public and abstract (by default).
- A class can implement an interface.
- For declaring an interface, we use the keyword **interface**.

Syntax:

```
interface Interface_Name{
//Methods
}
```

We can implement multiple interfaces in one class and parent interfaces can be declared using a comma(,) operator.

Syntax:

```
public class A implements C, D {
Code
}
```

15) Explain inheritance in Java? How can it be achieved?

- Inheritance in Java is a process by which one class can have all properties of other class. That means one class inherits all the behaviour of the other class.
- Inheritance increases the code reusability.
- Inheritance is an important feature of OOP concept.
- Inheritance is also a representation of the IS-A relationship

There are two terms used in inheritance:

1. **Child class (Subclass)**: Class which inherits other class, called a Child class or derived class.
2. **Parent class (Superclass)**: A class which got inherited by another class is termed as parent class or Base class.

The Syntax of java inheritance:

```
Class A extends B    // Here A represents subclass and B represent Superclass
{
// Code
}
```

16) Can we use multiple inheritance in Java? Explain with reason?

No, we cannot use multiple inheritance in java as it creates ambiguity and diamond problem in the program. To overcome this problem, we can use interface in Java.

Let suppose class A inherits the two parent class B and C in which a method with the same name is present in both the classes and hence when we try to override that method it will create confusion for the compiler and will give the compilation error. Therefore, Java doesn't support **multiple inheritance**.

17) What can we do if we want to access a private member of a class?

We can access private members of the class by using public getters and setters from outside the class in Java.

18) What is the significance of "static" keyword?

- Static keyword in Java is a non-access modifier which can be used with the block, variable, methods, and nested classes.
- Static Keywords are the part of the class, and it does not belong to the instance of the class.
- We use static keyword in java with variables, block, and method for achieving memory management.
- Java static property can be shared by all the objects.
- For accessing the static members, we don't need to create the instance of the class.

19) What is "Collection Framework" in Java?

Collection Framework in Java is an architecture for storing the classes, and interfaces and manipulating the data in the form of objects. There are two main interfaces in Collection Framework that are:

- Java.util.Collection
- Java.util.Map

20) What is List interface in collections?

List interface is an interface in Java Collection Framework. List interface extends the Collection interface.

- It is an ordered collection of objects.
- It contains duplicate elements.
- It also allows random access of elements.

Syntax:

```
public interface List<E> extends Collection<E>
```

21) What do you understand by object cloning?

Object cloning is a mechanism of creating the same copy of an object. For object cloning, we can use clone() method of the Object class. The class must implement the java.lang.Cloneable interface, whose clone we want to create otherwise it will throw an exception.

Syntax of clone() method:

```
protected Object clone() throws CloneNotSupportedException
```

22) Can we insert duplicate values in Set?

We cannot insert duplicate elements in Set. If we add a duplicate element, then the output will only show the unique elements.

23) What is the difference between Collections, and Collection in Java?

Collection and collections both are the part of Java Collection Framework, but the primary differences between both are given below:

- A Collection is an interface in java and Collections is a class of collection framework.
- The Collection interface provides the methods that can be used for data structure whereas Collections class provides the static methods which can be used for various operation on a collection.

24) What is "Diamond problem" in Java? How can it be removed?

The Diamond problem occurs in multiple inheritance, but Java does not allow multiple inheritance. In case of Java, it can occur with interfaces. When we implement two interfaces which are having methods with the same signature then it creates ambiguity for the compiler, and it gives compile time error. Its structure looks like diamond so it is called as Diamond problem.

E.g. Let's take an example which will show the diamond problem.

```
interface InterfaceA {  
    default public void m1() { System.out.println("This is interface A!"); }  
}  
  
interface InterfaceB {  
    default public void m1(){ System.out.println("This is interface B!"); } //same signature as interface InterfaceA?  
}  
  
public class Simple implements InterfaceA, InterfaceB {  
    public static void main(String args[]) {  
        Simple s1= new Simple();  
        s1.m1(); // It will give error..  
    }  
}
```

Error: Simple.java:10: error: class Simple inherits unrelated defaults for m1() from types InterfaceA and InterfaceB

25) What is an abstract class in Java?

- An Abstract class is used to achieve abstraction in Java. If we use the keyword "abstract" with the class name, then it is called as an abstract class.
- An Abstract class can have only methods without body or can have methods with some implementation.
- The Abstract class cannot be instantiated
- It's not necessary that an abstract class should have an abstract method.

Syntax:

```
abstract class Student{  
}
```

26) What is deadlock condition in multithreading?

A Deadlock condition occurs in the case of multithreading. It is a condition when one thread is waiting for an object lock, which is already acquired by another thread and the second thread is waiting for lock object which is taken by the first thread, so this is called deadlock condition in Java.

27) Differentiate between Collection and array.

The Collection and Array both are responsible for storing the data, but the fundamental differences between both are given below:

- Arrays are always of fixed size, we cannot change its size at runtime, but In Collection, size can be changed dynamically.
- Arrays can only store homogeneous or similar type objects, but in Collection, both homogeneous and heterogeneous objects can be stored.
- Arrays cannot provide the "ready-made" methods for user requirements as sorting, searching, etc. but Collection includes readymade methods to use.
- Arrays are good in performance as compare to Collection but Array take more space in memory in comparison to Collection.

C/C++ Interview Questions

28) What is call by value and call by reference?

There are two ways in C language to pass the values in the function that are:

- Call by Value
- Call by reference

Call by value: In call by value, a copy of the value is passed to the function so, if we change in formal parameters it will not affect the actual parameters. When we change in the value of the formal parameter in the "calling function," it just takes it as the local variable and does not affect the actual value.

Call by reference: In call by reference, an address of that value is passed to the function so, if we make any changes in formal parameters it will affect the actual parameter as well.

29) Explain dynamic memory and static memory allocation.

There are two types of allocation of memory:

- **Static memory allocation:** The allocation of memory at the starting of the program is called static memory allocation. In static memory allocation size remains fix i.e. we cannot change the size at runtime. Static memory allocation is used in Array.
- **Dynamic memory allocation:** The allocation of memory at runtime is called as dynamic memory allocation. We can specify a size at runtime as per need. The memory gets allocated from heap area, and it can also be deallocated from same. Dynamic memory allocation used in pointers.

30) What is difference between "var++" and "++var"?

The expressions, (var++) and (++var) both are used for the incrementing the value of variable var.

The main difference between both is that, (var++) it gives the evaluation of statement first and then it increments the value by one whereas (++var) is used as it increments the value by one before the evaluation of the expression.

E.g.

```
#include <stdio.h>  
  
int main()  
{
```

```
int a,b;
a=5, b=1;
printf("%d %d", a++, a); //will generate 5, 6 as output
printf("%d %d", ++b, b); //will generate 2, 2 as output
)
```

31) Differentiate between class and structure in C++.

The class and structure both are approximately equivalent to each other. But the main differences between both the terms are given below.

- The members of the class are accessed as private by default whereas members of the structure are accessed public by default.
- Class in C++ is a group of objects, related variables, and functions, whereas Structure is a user-defined data type which performs its operation
- We can declare a class using the keyword 'class', whereas we can declare a structure using the keyword 'struct.'
- The objects of the class, created at heap area of the memory, whereas the object of the structure created on stack area of memory.

32) What are the access specifiers in C++?

We use access specifier to prevent the access of the class members or to implement the feature of **Data Hiding**. In C++, there are some keywords used to access specifier within class body, which are given below:

- **Public**: If we specify a class member as public then it will be accessible from anywhere within a program. We can directly access the private member of one class from another class.
- **Private**: If we specify any class member as private then it will only be accessed by the function of that class only. We cannot access the private member of the class outside the class.
- **Protected**: Protected access specifier is mainly used in case of inheritance. If we define the class member as protected, then we cannot access class member outside the class, but we can access it by subclass or derived class of that class.

E.g. Below is the example to show the access specifier in C++.

33) Why we use of "getch()" in a program?

The getch() function is a predefined library function which is used to take a input character from the screen, and it holds the screen till it not get character from input.

```
#include<stdio.h>
main()
{
printf("enter the character. \n");
getch();
}
```

Output:

```
enter the character.
```

34) What does "main()" function in C++? Can we run a program without main method?

In C++ programming language the main() function is the entry point of that program. When we start execution of any program, execution directly goes to the main() in the program.

Syntax for main():

```
void main(){
///Program body;
}
```

35) What is the declaration and definition of a variable?

Declaration of Variable: Declaring a variable or function is that we are declaring the name and its type so that it can be used in the program. The Compiler can understand and use those variables and functions. Declaring a member gives its representation in that program.

e.g.

```
extern int x;  
extern char y; // It tells the compiler that there are two variables x and y of types char and int
```

Definition of Variable: Defining a variable means, we are providing some value to it, or we are initializing it with some value. Defining a variable or any member of the program gives the complete information about it.

e.g.

```
int x= 2;  
char y = 'A', 'B'; // It defines the variable x and y by giving its value or body.
```

36) What do you understand by Friend function?

A friend() function in C++ is a function which can access private and protected members of another class in which it is declared as a friend. We can declare a function as a friend function by using keyword friend. A friend function can be of two types:

1. Method of another class
2. A global function

Syntax:

```
class Class_Name {  
//Line of code  
friend return-type func_name() ;}
```

The above-declared friend function can use private members of the class.

37) What is memory allocation in C?

Memory allocation is a process of allocating or reserving some portion of the memory (or as per need) for the execution of the code.

There are mainly two types of memory allocation in C:

1. Static memory allocation
2. Dynamic memory allocation
 - **Static memory allocation:** The allocation of memory at the starting of the program is called static memory allocation. In static memory allocation size remains fix, i.e., we cannot change the size at runtime. Static memory allocation is used in Array.
 - **Dynamic memory allocation:** The allocation of memory at runtime is called as dynamic memory allocation. We can specify a size at runtime as per need. The memory gets allocated from heap area, and it can also be deallocated from same. Dynamic memory allocation used in pointers. There are four types of the predefined function used for dynamic memory allocation
 1. malloc()
 2. calloc()
 3. free()
 4. realloc()

38) Differentiate between malloc() and calloc()?

The malloc() and calloc() are the two pre-defined library function available in <stdlib.h> Library. Both the functions are used for dynamic memory allocation for the execution of the program. The basic differences between the malloc() and calloc() are given below:

- The malloc() stands for memory allocation while calloc() stands for contiguous allocation
- The malloc() allocates a single block of memory whereas calloc() allocates multiple blocks of memory.
- The malloc() takes only one argument, i.e., size of given block. Whereas calloc() takes two arguments, i.e., a number of blocks to be allocated and size of all blocks.
- The malloc() function is faster than calloc() function for memory allocation.

Syntax for malloc() function:

```
ptr= (type_cast*) malloc( size_t size );
```

Syntax for calloc() function:

```
ptr= (type_cast *) calloc(n , size_t size );
```

39) Why is C a procedural language?

Procedural language defines a language which follows some pattern, hence C language is called as procedural language as in C language a programmer must follow a specific pattern or flow of the program. C language follows a top-down approach to solve a problem. It mainly focuses on the flow of the program rather than the data.

DBMS interview questions

1) What do you mean by data structure?

A data structure is a specific way of arranging and managing the data in the computer so that it can be accessed efficiently and can be modified and updated easily. Some examples of data-structure are given below

1. Array
2. Linked List
3. Queue
4. Stack, and many more.

2) What is normalization? What are its types?

Normalization is the process of organizing the data in the database to reduce redundancy of the data and achieving data integrity. It is also called as database normalization or data normalization.

By normalizing the data we can arrange the data in tables and columns, and a relationship can be defined between these tables or columns.

There are following types of normalization available which are used commonly:

- First normal form (1NF)
- Second normal form (2NF)
- Third normal form (3NF)
- Boyce & Codd normal form (BCNF)
- Fourth normal form (4NF)

3) Explain the "primary key," "foreign key," and "UNIQUE key" in Database?

Primary Key: A primary key in the database, is a field or columns, which uniquely identifies each row in the database table. Primary key should have a unique value for each row of the database table. And it cannot contain null values. By default, a primary key is a clustered index.

Unique Key: A unique key also works as primary key except that it can have one null value. It would not allow the duplicate values. By default, the unique key is the non-clustered index.

Foreign Key: A foreign key is used to create a link between two tables. It can be defined in the second table, but it will refer to the primary key or unique key of the first table. A Foreign key can contain multiple null values. A foreign key can be more than one, in the table.

4) What is XML in DBMS? Explain its types?

- XML in database termed as "**eXtensible Markup Language**."
- XML database is designed for storing and transporting of the significant amount of data in the XML format.
- XML database is primarily associated with document-based databases.
There are two types of XML database used which are:
 1. XML-enabled
 2. Native XML

XML-enabled Database: - XML-enabled Database is same as RDBMS where data can be stored in tables which consists of columns and rows. It is an extension for the conversion of XML documents.

Native XML database: - Native XML-database stored the data which is based on container not in the format of a table. Using the Native XML database we can save the considerable amount of data. We can query the data in Native-XML database using X-path expressions.

5) Differentiate between CHAR and VARCHAR2?

We use CHAR and VARCHAR2 in the database to store the string in the database. But the main difference between both the terms are given below:

- CHAR is of fixed size, and VARCHAR depends on the size of the actual string which we want to store.
- If we use CHAR to store a string, then it will take memory as the size we have defined, but VARCHAR2 will take the memory as per the size of the string. So using VARCHAR, we can use memory efficiently.

6) Differentiate between DELETE and TRUNCATE command in SQL?

We can use two commands to delete a row from the Table that are TABLE and TRUNCATE command.

The main differences between both the commands are given below:

- TRUNCATE is a known as DDL command whereas DELETE is a known as one of the DML commands.
- DELETE can remove some rows from the table and TRUNCATE command can be used for removal of all rows from the Table.
- IF we use DELETE command without using WHERE clause it will delete the complete table, but it will not free the container space whereas TRUNCATE command will remove the entire TABLE and free the space which table contains and we cannot use WHERE clause with it.
- DELETE command does not reset the identity of the table whereas TRUNCATE can reset the identity of the table.

The Syntax for DELETE command:

```
DELETE FROM table_name [WHERE condition]; // WHERE clause is optional to use.
```

It will delete the selected rows which match the WHERE clause conditions

The Syntax for TRUNCATE command:

```
TRUNCATE TABLE table_name;
```

It will delete the complete table and free-up space

7) What is DML command in DBMS?

DML stands for **Data Manipulation Language**. The SQL commands which deals with data manipulation are referred to DML. Some DML commands are:

- **SELECT**- This command is used for retrieval of the data from the table of given database.
- **INSERT**- This command is used to insert or add the data into the table.
- **UPDATE**- This command is used to update the existing data in the table.
- **DELETE**- This command can be used to remove the records from the table.

8) Why do we use DBMS?

DBMS stands for "**DataBase Management System**". It is used to deal with Data.

Following are the uses of DBMS:

1. Creation of the Database
2. Managing the data in the database
3. Updating of data in the database
4. For the retrieval of data from the database.
5. Efficient memory management
6. DBMS provides the Security of the data

9) Differentiate between "Hot Backup" and "Cold Backup" in the database?

In the database we can take backup of data in two ways:

1. Cold backup
2. Hot backup

Cold Backup: - Cold backup is a physical backup, and it is also termed as the offline backup. Cold backup, works when the database is in offline mode, and no any user is logged-in. In the cold backup, all the files are copied without risk of any change. It is a more secure way of backup of data and control files. **E.g., A USB drive or hard drive can also be considered as the cold backup, if it is unplugged after each backup.**

Hot Backup: - Hot Backup is also a physical backup, and it is termed as Online-backup. Hot backup is a backup which performed on data while the database is active for all user. Hot backup has a risk as it is available and open for all users. It is used if we want the complete backup of the database. Oracle provides a preferred method of backup, i.e., Recovery Manager (RMAN).

10) What are ON DELETE CASCADE options in DB table?

MySQL provides an effective way to delete the data from the database table is called as ON DELETE CASCADE option. It works in reference to the foreign key, in which if we remove the data from the parent table then data will automatically be deleted from the child table.

11) What is the AVL tree? What is its significance?

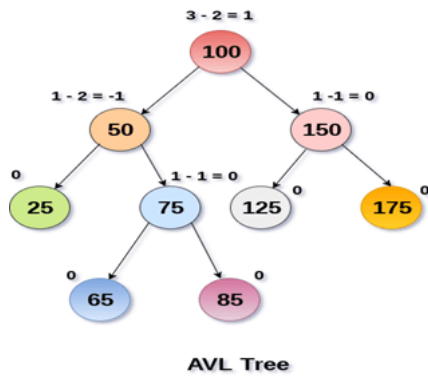
AVL tree is named after its invention by Adelson-Velsky and Landis. AVL tree is a height-balanced binary search tree of the self-balanced binary search tree in which:

- Each node of the AVL tree is associated with a balancing factor
- Balancing factor can be calculated as the difference between the heights of the left and right sub-tree cannot be more than one for each node in the tree.

Balance Factor (k) = height (left (k)) - height (right (k))

Time complexity: Since AVL tree is balanced, its height is $O(\log n)$ and hence time complexity for insertion is $O(\log n)$.

The Significance of AVL tree: As binary search offer good performance while searching in balanced case, but if they are unbalanced their searching performance can be reduced hence to overcome this problem we can use AVL tree as it is a self-balanced binary search tree. Therefore, it ensures a time complexity of $O(\log n)$.



12) Explain the turnaround time and response time? (OS)

Turnaround time: - Turnaround time defines the amount of required time to complete a request.

Response time: - Response time is the average time which is required for submission of the request, and the first response occurred.

Accenture Third Round: HR interview Questions

HR round is the last round of the Accenture recruitment process. In this round, Interviewer checks the communication and professional skills of the candidate.

A list of the top most asked HR question with examples:

1) Brief about yourself in a minute?

If we say "The first impression is the last impression" then it will be the perfect fit for this question. In the most of the cases during an HR interview, it would be the first question, and you have a very first chance to impress the interviewer with your perfect and enthusiastic answer.

a.) The aim of the question:

Before answering this question, you must know why this is the very first question and why it is asked? So by asking this question interview starts the conversation and he just wanted to examine whether the candidate is suitable for the job and job environment, by knowing in detail about the candidate.

b.) How to Answer for this question:

Now, how you can fulfil the expectations for this question. So the first thing that before answering this question you must be full of confidence and relaxed and then start answering.

Following is the flow for the answer to this question:

- **Introduce Yourself:** The very first sentence must be your basic introduction to yourself in a very professional way. The Interviewer just want to know about yourself so concentrate and be precise.
- **About your academics and previous experience (if have):** After introducing yourself, the next thing come is to give the brief knowledge to the interviewer about your academics and your previous experience so that the interviewer can judge whether you fit into basic job criteria or not. So give only overview about your recent academics and experience, not the whole story.
- **Family background (Optional):** Tell about your family background is totally optional. If the interviewer gave you enough time for introduction then you can tell it else it's not mandatory.
- **Hobbies, strength, and goals:** This is the step where you got another chance to impress the interviewer. But the most important point for this step is to be real or truthful that means you should not boast yourself.
- **Conclude:** Now, conclude the answer with the smile and prepare to answer to the next question.

Example introduction:

“ Hello/Good morning/ after noon, my name is XYZ, and I belong to the city New Delhi. Before starting to introduce myself, I would like to thank you for this great opportunity. I did my schooling from St. Mary's Convent School and scored

75% in higher secondary and scored 80% in senior secondary. I have completed my B. Tech from Amity University and scored 75% marks. I got trained and certified for multiple technologies as core and advanced Java, HTML, SQL. I worked on a project which was based on the web-based application for digital marketing. My hobbies are playing cricket, and I love singing and creating various types of application tools. My strengths are that I am very adaptive, and having leading qualities. My Objective is to join this organization where I can prove myself by doing my level best so that it can polish my skills as well as I can give minor support with full efforts to grow this organization. ”

2) Why did you apply for this job?

This is the next crucial question which can enhance your chances to be selected. So in this question, the interviewer just want to know whether you know about the company and about your role in that company. The first thing you should remember that you must have good knowledge of the company and as well as the role for which you have applied.

How to answer:

To answer this question, you must try to match your skills to the job description. The interviewer wants to hire those candidates who have the sufficient knowledge about the role for which they have come. Try to give some good points of the company in front of the interviewer and try to show interest in yourself with that points of the company.

Example:

“ I have applied for this Job as I feel it will be best suited to me as per skills. I can give my best for this job. When I was going through job-description I have noticed that you have mentioned that you need someone who can do_____, so I was very excited as I have very good knowledge in this field as I have also worked on the project at my college time and even got trained in this technology. ”

3) How have you prepared for this interview?

While preparing for an interview, no one thinks that the interviewer can ask about the preparation strategies and then we got stuck with this question. But there are also some tips to tackle such type of questions.

By asking this question, the interviewer wants to check that how sincere and how serious you are for this job opportunity so answer in this way only.

How to Answer:

There are some points below mentioned which you need to keep in mind while answering this question:

- Try to ensure the interview that you have searched about the company profile as well as product and service of the company
- Answer in a way that you were really interested in this interview and hence also studied and prepared for technical and aptitude rounds.
- Tell about good points, people reviews for the company and if any improvement can be possible (in a positive way)

Example:

“ When I got to know about this interview, firstly I got excited about this as I was eagerly waiting for such an opportunity. But I was not much aware of the company's service and products hence I searched a lot for it and also many interesting points for this company (brief some point). Then I went through the Job description and requirement and refreshed my theory and practical part of technologies. So this way, I have prepared myself for this interview. ”

4) What is your biggest achievement till now?

This question is a fascinating question of an interview as the interviewer wants to know about yourself in deep. By this question the interviewer wants to know that:

- What makes you creative in your life?

- Which things drive you?
- What really matters for you in your life and what motivates you?
- What is your potential?

How to Answer:

This question should be answered in a way that picks up the interviewer interest. So, there are some ways to answer this question:

- Keep your answer real that means just tell those achievement which you proud of.
- Keep it recent that means to tell that biggest achievement which you have in recent years.
- Keep it professional. Your answer should be professional for your achievement.

Example:

“ I have got various achievements in my carrier, but the most notable achievement was the delivery of my college project. We have opt to create an iOS mobile app, as some of our team members including me was having reasonable knowledge of iOS, and the guy who was leading us was senior and had worked with many iOS projects. But due to some issue, he needs to go out of town so, I was selected as lead for that project. So with my continuous practice and enthusiasm including my team members, we have completed our task, and our project was one of the best projects of our college. ”

5) What do you know about our Company?

This is a very likely question for most of the interviewer, in this question the interviewer wants to check two things in the candidate:

1. Do candidate really care about the company and his role that means they want a candidate who is sincere enough about the company and don't want any candidate who comes in the interview without knowing the details about the company.
2. Whether the candidate is a good researcher or not. As they also wanted to check that how a candidate searches for the company, and in how much details.

How to answer:

To answer this question you must have good knowledge, and you have already researched the company profile, then only you will be able to answer this question. There are some points you need to mention while answering this question:

- What are they famous for?
- How many employees are they having?
- In how many countries are they situated
- Who is the Founder & CEO of the company

6) Why should we consider you for this job?

This is one of the challenging questions of the interview, but it can also open the door for the selection in that interview process. This is the question to check your abilities which you know about and which you can define. It is to know that what makes you different from other candidates for the selection in this Job. So be careful while answering this.

How to Answer:

This question should be answered in some tricky way. This question will check your marketing skills as you need to tell your selling points in this question. What makes you different from others? There are some points to remember while answering to question:

- Show the enthusiasm and passion for that job.
- Tell your unique qualities as compare with others
- Tell your skills to be the best fit for this opportunity
- Tell your positive points and strength concerning the job profile.

Example:

“ Well, this job profile is what I wanted to work for and as I also have a good knowledge in this field with the practicals as well as theoretical which I can implement in a very efficient way. I have worked with two major projects in the previous company and also get awarded for that. I am very passionate about learning new technology so that it will also be helpful for this job profile. The last thing that my way of doing a task is somewhat different as I work in a very smart way not in a hard way. So am relay excited to work with your company. Thank You. ”

7) Tell me some current headlines?

This question is optional for an interview. This question can vary from candidate to candidate. By this question generally, the interviewer wants to know whether you are aware of the general studies or not.

How to answer:

To answer this question, you must be aware of the current day's headlines. You can only answer this question if you have read a newspaper, or you have searched the current day's headlines.

8) What are your goals for the next five years?

The above question is one of the common questions asked in interviews. By this question, the interviewer wants to know about your future goal. The interviewer wants to check what you wanted to be in your career. So you can answer this question with some tricks.

How to answer:

To answer this question, you should be very clear for your future goal oriented to that company. You can answer this question by following ways:

- Answer this question in very general term if you are not sure about your career path.
- Answer in a very straight way and be specific about your goal.
- Show your interest to achieve the long-term goal in that company.
- Think about the answer for a while and then answer.

Example:

“ I want to see myself as one of the topmost performing employees in a well-established organization like yours and want to contribute my skills and knowledge to the enhancement of my career growth as well as company growth. ”

9) What is your greatest strength? How will it be helpful for this job?

This is one of the easy questions in the interview, but sometimes it might be tricky as well. By asking this question, the interviewer wanted to check if your strengths are aligned with the companies benefit. They wanted to know that if the employee can be the best performer from the rest.

How to answer:

For answering this question you should make a note of the following key points before going to an interview.

- Create a list of strengths and choose your greatest strength which makes you creative.
- Always access your skills before going for an interview, which will help you to identify your strength.
- Always ready with a live example for your strength.
- Tell the strength which can be most helpful and relevant to your job profile.

10) If you feel work pressure, how will you deal with it?

One most common asked interview question is that how to deal with work pressure? So answering this question is very simple but before that, we should know that why the interviewer has asked this what he wanted to know. So this question is very straight as interviewer just wanted to know that, can you work under pressure or not?

How to Answer:

Every one of us have some techniques to handle or deal with the pressure. It might be an assignment pressure, family pressure or many others, so we answer this question in that way only. But it must be the professional way and in a positive manner. There are some points for giving this answer:

- You must provide an answer in a very positive way.
- Answer this question with an example.
- Your response and your body language should match.
- It should be the honest answer.

Example:

“ I work more efficiently under pressure as I feel it is challenging my abilities and I need to prove myself. I have found myself more creative under pressure conditions with some deadlines. When I got such type of situations, my first thing is always to be positive, and I started doing work with more concentration. For example, in my recent project I have assigned a task which was based on the latest AI technique, about which I was not so much aware, but still I worked on that technology I learned it, and I successfully completed my task, and also I got employee of the month award because of that project. ”

11) What do you want to achieve in your life?

A very familiar question for everyone not for the interview although throughout of life. From our childhood till today's date everyone has faced this question several times, and answers for this also vary from time to time, but the question is that, how to answer in the interview for this. By this question, the interviewer wants to know in deep about you and how much time you want to spent with that company. How much loyal will you be for the company?

How to answer:

For answering this question there is no any particular way as everyone is unique and wanted to achieve some unique things in his/her life. So there is just one solution to this that being honest while giving this question. Everyone should be clear about his life goal then only he/she can answer this question correctly.

12) Are you ready to relocate?

There are various types of job where you need to relocate yourself from your residence to any other place according to job location. So this is also a critical question for a candidate as he/she needs to prepare himself mentally as well as physically. So, to check whether you can adjust or relocate yourself is this question and also interviewer wanted to test your flexibility, enthusiasm, and commitment.

How to answer:

Some tips on how to ready to answer to this question:

- The very first thing you need to check Job description before going for an interview as can you relocate yourself or not.
- If you are not having any issue while relocating then answer this with full of enthusiasm as you are eager to join the company.
- If you have any problem, you can discuss it but in a very positive way so that it can be considered.

Example:

“ Sir, I would love to relocate to be a part of such a well-reputed and wonderful company. I can't miss such a great opportunity. Thank you! ”

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