



Capgemini Interview Questions and Answers

Introduction

Getting selected at Capgemini is a goal for many students and professionals. The company handles global projects, so the interview process is not casual. It tests how you think, how you speak, and how you solve problems.

Most candidates expect only technical questions. That is not always the case. The discussion often moves between aptitude, core subjects, real scenarios, and simple HR questions. Sometimes the technical part feels easy, but explaining your answer clearly becomes the real challenge.

If you walk in without knowing the pattern, confidence drops quickly. Preparation helps. Not memorising answers, but understanding how to frame your thoughts. In the following sections, you will find commonly asked Capgemini interview questions along with practical answers to help you prepare in a steady and realistic way.

Capgemini Interview Process for Freshers

You usually don't face everything at once when you attend an interview at Capgemini. The stages unfold one after another. Knowing that order makes a difference.

- **Online Test:** This is where most candidates start. Aptitude questions. Logical reasoning. Sometimes basic coding. The tricky part is not always the difficulty. It is the clock. A few seconds of panic can cost more than a tough question.
- **Technical Round:** Things slow down here. One or two interviewers sit across from you and open your resume. They may jump straight to your project. Why did you choose that approach? What would you change now? Sometimes they throw in a small problem and watch how you think, not how fast you answer.
- **HR Round:** The conversation feels lighter, but do not mistake that for casual. You might be asked about relocation, long term plans, or why you prefer Capgemini. They notice tone, clarity, and how steady you sound.
- **Group Discussion:** This does not happen in every drive. If it does, you sit with other candidates and discuss a topic. Speaking first is not mandatory. Speaking with clarity is.

Some rounds feel quick. Some stretch longer than you expect. Preparation helps, but understanding the flow helps more. Once you know what comes next, the pressure reduces.

Capgemini Eligibility Criteria for Students and Freshers

Before you apply to Capgemini, check whether you fit the basic requirements. Many students ignore this step. Later they realise they were not eligible in the first place.

- **Degree Requirement:** Most hiring drives focus on BE, B.Tech, MCA, or similar technical degrees. Some roles also consider B.Sc or BCA. It depends on the project need at that time.
- **Academic Percentage:** There is usually a minimum percentage cut off. It can vary by campus or location. A steady academic record gives you an edge. Large drops in marks may invite questions.
- **Backlogs:** Cleared arrears are often acceptable within limits. Active backlogs usually create problems. If you still have pending subjects, clear them early.
- **Gap in Education:** A short break is fine when you can justify it. Health issues, family reasons, or skill courses are common explanations. Be honest. They will ask.
- **Age and Year of Passing:** Some drives target only recent pass outs. Check the notification carefully before registering.
- **Basic Skills:** Knowing one programming language is expected for technical roles. You should also be able to explain your project clearly. Communication matters more than you think.

Not every candidate gets rejected for low marks. Sometimes it is poor clarity or lack of preparation. Read the eligibility details properly. Then apply with confidence.

List of Capgemini Interview Questions for Freshers

1. What does Python's range() mean?
2. Describe primary and secondary keys.
3. Why are strings in Java automatically immutable?
4. Tell the difference between UNION and UNION ALL.
5. What distinguishes Dataset.clone() from Dataset.copy()?
6. How much are you aware of the #pragma directive?
7. What is the disadvantage of scanf() and is there a way to prevent it?
8. What structure is utilized to link the operating system and the C program?
9. How does Python handle memory?
10. What benefits do NumPy arrays have over Python lists?

Capgemini Technical Interview Questions and Answers for Freshers

1. What does Python's range() mean?

To create an iterable sequence of numbers with a specified step between the start and finish points, use the range() function. A built-in object called a range object is produced by the range function and can be iterated through. In Python code, the "for" loop is typically used with this range object.

2. Describe primary and secondary keys.

Primary Key: In a database, a primary key is used to uniquely identify a record.

A secondary key is an extra or alternative key to a primary key that is used to find certain data.

3. Why are strings in Java automatically immutable?

An iterable sequence of numbers between a start and stop point with a defined step can be created using the range() function.

The range function creates a range object, which is an iterable built-in object. This range object is typically used in conjunction with the "for" loop in Python scripts.

4. Tell the difference between UNION and UNION ALL.

We utilize the SQL UNION method to combine the output of two or more SQL SELECT queries. The number of columns and data types in each of the two tables where the UNION action is executed must match for the union operation to take place.

- With the UNION operation, duplicate rows are eliminated from the result set.
- An union ALL operation is identical to a union operation. Without removing duplicates or sorting the data, it returns the set.

5. What distinguishes `Dataset.clone()` from `Dataset.copy()`?

`DataSet.clone()` creates a `DataSet` object with the exact same structure as the original dataset object, including all relations, constraints, and schemas, but only duplicates the `DataSet` object's schema. There will be no data copying from the old one to the new one.

An existing `DataSet` object's whole code and structure are copied via `DataSet.copy()`.

6. How much are you aware of the `#pragma` directive?

A preprocessor directive called `#pragma` can be used to enable or disable particular features. Its three types are `#pragma startup`, `#pragma exit`, and `#pragma warn`.

- We can offer functions that are called upon script startup by using `#pragma startup`.
- We can designate functions that are run upon code termination by using `#pragma exit`.
- The computer is instructed by `#pragmawarn` to suppress any warnings or not.

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7. What is the disadvantage of scanf() and is there a way to prevent it?

If you pass scanf() a string of characters, it will fail. Scanf() cannot be used to input a multi-word string into a single variable. We can use the gets() function to prevent it. Upon pressing the enter key, a string is pulled from the keyboard and terminated. Tabs and spaces may be included in the input string.

8. What structure is utilized to link the operating system and the C program?

The file structure serves as a link between an application and the operating system. The file is defined by the standard input/output header file, or "stdio.h.". It provides details about the open file, including its size, location in memory, and current state.

9. How does Python handle memory?

Python manages memory through its private heap space. All Python objects and data structures are stored on the private heap, which is inaccessible to programmers. However, the Python interpreter handles this.

- Allocating heap space for Python objects is the responsibility of the memory manager in Python. A few programming tools are then available to the programmer through the core API.
- Additionally, it has an embedded garbage collector, which recycles all unused memory and releases it into the heap, as the name suggests.

10. What benefits do NumPy arrays have over Python lists?

The following are some advantages of NumPy arrays over Python lists:

- Unlike Python lists, NumPy arrays store data sequentially, simplifying data processing.
- It's easier to use NumPy. We can execute numerous vector and matrix operations for free, which spares us from needless labor.
- NumPy arrays are faster in offering a plethora of useful features such as FFTs, convolutions, fast searching, basic statistics, linear algebra, histograms, and more.

List of Capgemini Interview Questions for Experienced

11. Explain virtual functions and pure virtual functions.
12. What is a DNS forwarder?
13. Decipher `public static void main(String args[])` in Java.
14. Explain the Golden Ratio.
15. Differentiate `malloc()` and `new()`
16. What makes `getch()` and `getche()` different from one another?
17. Explain Java String Pool
18. Enumerate the benefits of Tries compared to Binary Search Trees (BSTs).
19. In what ways does the protocol for dynamic host configuration aid in network administration?
20. What are the drawbacks of implementing queues with an array?

Capgemini Technical Interview Questions and Answers for Experienced

11. Explain virtual functions and pure virtual functions.

Virtual Functions:

Virtual functions are member functions that are declared in derived classes and overridden by base classes.

- The main purpose of their implementation is to enable runtime polymorphism.
- Functions in base classes are declared using the virtual keyword.
- Resolution of function calls is done at runtime.

Pure Virtual Functions:

Pure virtual functions, sometimes referred to as abstract functions, are those that are exclusively specified in the base class. This means that they need to be redefined in the subclass because they are not defined in the base class.

12. What is a DNS forwarder?

A DNS server that routes DNS requests for external DNS names to DNS servers beyond the network is known as a DNS forwarder.

When a DNS server gets DNS queries that take a long time to resolve, it uses a forwarder. As a result, it sends these queries to outside DNS servers for processing.

The behavior of a DNS server with forwarding configured differs from that of a DNS server without forwarding configuration.

When set up as a forwarder, the DNS server acts as follows:

- The DNS server uses a cache to resolve the query when it receives it.
- If the request is not resolved, the DNS server forwards it to another DNS server.
- In the event that the forwarder is unavailable, a root hint is used to attempt to answer the question.

13. Decipher **public static void main(String args[])** in Java.

public: This access modifier indicates to whom this method is accessible.

Static: This Java keyword indicates that the method is class-based. The public indicates that it will be available to any class. Java makes main() static so that it can be called without first generating a class instance.

The JVM calls main() before any objects are created, and only static methods can be called directly via the class. The compiler will generate an error if the main file is not made static.

void: This is the method's return type. The term "void" describes a method that yields no value.

main: The method's name is what the JVM looks for when it finds an application that only has a specific signature. This is the process where the primary execution takes place.

string args[]: This is the argument that the main method receives.

14. Explain the Golden Ratio.

The ratio of any two consecutive (one after the other) Fibonacci numbers is approximately equal to the Golden Ratio, or 1.618034.... In actuality, the

approximation gets closer the larger the pair of Fibonacci numbers. Let's examine a couple of them:

$$3/2 = 1.5$$

$$5/3 = 1.666666666...$$

...

$$233/377 = 1.618055556...$$

When we begin the sequence with two random whole numbers, this also functions.

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15. Differentiate malloc() and new()

Malloc() and new are the two methods used in C++ for runtime memory allocation. The following is a list of the differences:

- While new() is a pre-processor, malloc() is a function.
- There is no need to allocate memory when using new(); however, sizeof () is required when using malloc().
- Malloc() gives the freshly allocated memory a random number, whereas new() sets the new memory to 0.
- When initializing an object, the new() operator allocates memory and calls the constructor, while the malloc() function allocates memory but does not call the constructor.

- The new() operator outperforms the malloc() function because it is faster than the function.

16. What makes getch() and getche() different from one another?

The only distinction between these two C functions, which both read characters from the keyboard:

- Function getch() reads characters directly from the keyboard without the need of buffers. Therefore, there is no data displayed on the screen.
- Getche() uses a buffer to read characters from the keyboard. As a result, data appears on the screen.

For the distinctions between the two functions, consider the following example:

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
int main()
```

```
{
```

```
    char c;
```

```
    printf("Enter a character here: ");
```

```
    c = getch();
```

```
    printf("\nYou entered the character: %c",c);
```

```
printf("\nEnter another character. ");

c = getche();

printf("\nYour new entered character is: %c",c);

return 0;

}
```

Output

Enter a character here:

You entered the character: c

Enter another character: b

Your new entered character is: b

Without waiting for the enter key to be pushed, `getch()` returns the character right away, and the character is not shown on the screen. Without waiting for the enter key to be pushed, `getche()` shows the character on the screen.

17. Explain Java String Pool

Java's designers knew that programmers would use the string data type extensively. Therefore, they started looking for optimization right away.

- They devised the notion of keeping string literals in the Java heap's string pool for storage.

- Because of this, the String pool initially verifies if a newly produced object has already been generated in the pool before returning the same reference to the variable.
- If not, the reference will be returned, and a new object will be created in the string pool.

Their goal was to minimize the temporary String object's size by utilizing sharing. An immutable class is necessary to facilitate sharing.

Sharing changeable structures with two unidentified persons is not feasible. Therefore, the String Pool notion can be implemented more easily due to immutable Java strings.

18. Enumerate the benefits of Tries compared to Binary Search Trees (BSTs).

Tries have the following benefits over Binary Search Trees (BSTs):

- Searching for keys using the Tries is faster than using BSTs. Additionally, Tries's basic lookup operations—like array indexing with a character—move quickly on actual computers.
- More short keys per try result in a more space-efficient trial.
- Attempts to aid in longest-prefix matching, helping to identify the key with the longest character prefix that is possible—all of which are distinct.

19. In what ways does the protocol for dynamic host configuration aid in network administration?

A network management technique called Dynamic Host Configuration Protocol (DHCP) is used to dynamically assign each host on the network an IP address and other details so that they can communicate effectively.

20. What are the drawbacks of implementing queues with an array?

The following are the drawbacks of implementing Queue using an array:

Memory Waste: Because queue elements may only be inserted from the front, the space needed to store them can never be used again.

Array Size: Extending the array size requires a lot of effort and time. Additionally, unfilled spots cannot be reallocated. It gets more challenging to choose the appropriate array size at first.

Conclusion

We hope these hand-picked Capgemini interview questions and answers will be useful for you to prepare for your upcoming interviews with Capgemini.

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