

Technical Questions:

1. What is Data structure?

Data Structure is way of arrangement of data so they can be used efficiently in memory. Examples Arrays, Linked List, Stack etc

2. What is stack?

Stack is a linear data structure which provides a particular order in which operations can be performed. LIFO(Last in first out) is used in stack in which the element that inserted in last will be first to come out.

3. What is OOP?

It is a programming style associated with class and objects and revolves around four main concepts:- Inheritance, Polymorphism, Abstraction and Encapsulation

4. Difference between OOP and functional programming?

Both functional programming and Oop uses different methods for storing and manipulating data, in oop data is stored in objects, In functional programming use of ftns is emphasized where each performs a specific task.

5. What will be the database structure of many to many relationships between student & course?

Relational databases don't allow many to many relationship b/w tables, we will use junction table(bridge table) which will bridge the tables together by referencing primary keys of each table. E.g Student table has a primary key Student_id, and Course table has a primary key Course_Id, we will join these columns to make a junction table.

6. Write a SQL query to get the result of the above structure how many students are enrolled in Course ABC?

Assumptions that table has these fields

Student(Student_id, Name, Sec)

Course(Name, Course_Id)

Select Count(*) from Course WHERE Course_Name="ABC"

If you also want the details about the student then query will become

```
SELECT Student.Name, Student.Student_Id, FROM Course Inner Join Course ON  
Course.Course_Id = Student.Course_Id AND  
Course.Name IN ("ABC")
```