SAGENT:

Selection Rounds:

1. **Short Coding Round (1.5 hours):**
    - 10 MCQS:
        - Mostly from DSA (Java preferred).
        - Qs based on Selection sort, insertion sort and bubble sort. Eg. How does the array look after 3 rounds of Selection sort.
        - Binary Tree traversal based MCQs
        - Order of B tree/B+ tree
        - Minimum and maximum no of children nodes/keys in a B tree/B+ tree.
        - Find the Program output type Qs

          [Computer fundamentals (OS,CN,DBMS) - 1 or 2 Qs possible SQL (few Qs may come)] —> **Did not come in our test**
    - 6 programming Qs:
        - Based on basic DSA and functions.

2. **Long Coding Round (3 hours):**
    - An elaborate use case will be shared. Need to find the entities and implement some of the functionalities at least.
        - **First 1 hour:**
          Drawing the ER diagram for the use case on paper. You will have to explain your ER diagram to the panelists. Also focus on KEYS, RELATIONSHIPS and CARDINALITY.
        - **Next 1.5 to 2 hours:**
          Use OOPs and Data Structures to implement 1 or more functionalities/use cases.Not necessary to create a Database. You can implement using Collections alone like HashMaps , ArrayList or List.
        - Previous year use case: **Food Delivery Application**
        - Use case asked for Sagent interns was **Multiservice Fuel Card**

3. **Technical Interviews (~ 1 hour):**
    - 1 or 2 Tech interviews depending on the panel assigned to you.
    - Questions can be asked from

- OOPS
- DSA
- DBMS
- SQL
- CSE fundamentals (CN, OS)

- Be prepared with all the skills mentioned in your resume.
- Be prepared with your Projects and Internships

4. **HR Interview:**
   - General HR questions. Just be yourself. Be prepared to introduce yourself (for all interviews).

My Sagent On-Campus Experience:

- Long Coding Round:
  - Use case given was an **User Account Management System.**

- Technical Interview
  1. Asked to introduce yourself followed by Qs based on **Resume**.
     I was asked about my Internship, what role I played in the project.
     Was also asked to explain both the projects mentioned in my resume.

  2. **OOPs:** What is OOPs? I explained what is class, object and the 4 core concepts of OOPs are.
     Was also asked about Interface, what is the difference between abstract class and interface.
     Give a real time example or application where Interface is used (Why is interface needed here - justify)

  3. **DSA:**
     Was asked what all data structures I knew.
     Coding Qs based on array, LinkedList and Stack.
     - ➔ Find the subarray of contiguous array elements which has the maximum sum and return its sum.
     - ➔ Detect loop/cycle in a LinkedList.
     - ➔ Print the elements of a LinkedList in reverse order.

Some real time application(s) of LinkedList and Stack.
Why do we need LinkedList when we have arrays?

Some Python based Qs were also asked like -

- ➔ Difference between List and Array.
- ➔ Difference between List, Tuple and Set.

4. **DBMS:**

Some SQL based Qs were asked like -

- ➔ Display all the IDs in table T1 which are not in table T2.
- ➔ Display only the duplicate records in a table.
- ➔ Select the second maximum salary from the employee table.

5. **Computer Networks:**
   - ➔ Layers of OSI network model
   - ➔ asked me what all protocols I knew.
   - ➔ Difference between TCP and UDP.
   - ➔ Full form of TCP and UDP.