

Scenario:

You applied for a trainee position with a software development firm and were invited to an interview. You've been given the presentation to show off your problem-solving and programming abilities. You've been assigned a more difficult task: construct a fully functional, secure application for a particular business problem utilizing an IDE and according to coding standards.

Case study:

Based on the scenario, you are required to finish writing a **school management program** that uses the four fundamental characteristics of object-oriented programming (OOP) to handle all the online activities of the school easily and securely. You must develop a program to manage the information of **students** and **teachers** in a school.

List of user requirements:

- Design the classes that represent the students and teachers.
- Implement the classes using encapsulation, inheritance, and polymorphism to create a flexible and modular system.
- Implement methods that allow to enroll students or teachers to the courses.
- Store and display information about students and teachers.
- Implement a user-friendly graphical user interface to interact with the program.
- Implement exception handling to ensure the system can handle any errors or unexpected input.