

Object Oriented Programming		Spring 2025
Quiz 2		
Section: 65_B		
1.	Design a secure and structured banking system in Java using OOP principles. Implement a BankAccount class with private attributes (accountNumber, balance) to ensure data encapsulation. Provide methods for depositing and withdrawing money with validation, ensuring that deposits are positive and withdrawals do not exceed the available balance. Create a Savings Account subclass that introduces an additional interestRate attribute and overrides the withdraw method to impose a fixed withdrawal fee (WITHDRAWAL_FEE). Ensure that the total withdrawal amount, including the fee, does not exceed the account balance. Finally, demonstrate the functionality by creating instances of both BankAccount and Savings Account, performing deposits and withdrawals, and displaying the account details before and after transactions.	10
2.	A university is developing a student-course management system where each course must have a teacher. Teacher cannot exist independently within a Course, and if a Course is deleted, the Teacher is also removed. The Course class should store the course name and a Teacher object. A student can enroll in a course but can also exist independently. The Student class must have attributes for the student's name, ID, and Course reference. The system should include methods for students to display their details. The main method should create a Teacher, a Course, and two Students.	5