CT - 4
Section - C

Date: ID:
Name:

1.	Design a class BankAccount that represents a bank account using encapsulation. The class should include:A private attribute _balance to store the account balance. A static variable total_accounts to keep track of the total number of bank accounts created. Methods: a. __init__(self, initial_balance=0): Initializes the account with a starting balance and updates the static variable total_accounts. Ensure the initial balance is non-negative. b. set_balance(self, new_balance): Allows modifying the balance, but ensures the balance cannot be set to a negative value. c. deposit(self, amount): Adds the specified amount to the balance. Ensure the amount is positive. d. withdraw(self, amount): Withdraws the specified amount from the balance.	20

CT - 4

Section - C

Date: ID:

Name:

1.	Design a class Student that represents a student. The class should have:Private attributes called name, age and a static variable GPA.The class should include: a. __init__(self, name, age): Initializes the student's name and age. b. add_subject_grade(self, subject, grade,credits): Adds a grade for a subject and updates the static GPA. c. get_gpa(self): Returns the current GPA. d. get_name(self): Returns the student's name. e. get_age(self): Returns the student's age. Hints: GPA = sum of all (grades*credits) / total number of credits	20