INHERITENCE

1. Assume that a bank maintains 2 kinds of accounts for its customers, one called savings account & the other current account. The savings account provides compound interest & withdrawal facilities but no cheque book facility. The current account provides cheque book facility but no interest. Current account holders should maintain a minimum balance & if the balance falls below this level, a service charge is imposed.
   Create a class **Account** that store customer name, account number, and type of account. From this derive the classes **Curr-acc** & **Sav-acc** to make them more specific to their requirements. Include necessary methods in order to achieve the following tasks.
   a) Accept deposit from a customer & update the balance
   b) Display the balance
   c) Compute & deposit interest
   d) Permit withdrawal & update the balance
   e) Check for the minimum balance, impose penalty if necessary & update the balance

   Do not use constructors. Use methods to initialize the class members.

2. Implement a superclass Person. Make 2 classes, Student & Instructor, inherit from Person. A person has a name & year of birth. A student has a major, and an instructor has a salary. Write the class definitions & methods for the classes. Supply a test program that tests these classes & methods.

3. Make a class Employee with a name & salary. Make a class Manager inherit from Employee. Add an instance variable, named department of type string. Supply a method toString that prints the manager's name, department & salary. Make a class Executive inherit from Manager. Supply a methods toString that prints the string "Executive", followed by information stored in the Manager superclass object. Supply a test program that test these classes & methods.

4. Create Student Class having following attributes: Student ID, Name, CourseID, Sex and Phone Number.
   Create hosteller who is a student having the following additional attributes: HostelName and RoomNumber. Modify the room number and phone number. Display the updated details.

5. Create Employee having following attributes: Emp ID, Name, Designation, Project ID and Phone Number. An employee gets allocated to a new project. .
   Create a PracticeHead who is an employee having the following additional attributes: PracticeName, NoofCustomers. Add behavior to modify the NoofCustomers and PhoneNumber. And display the updated PracticeHead details.

6. Create Product having following attributes: Product ID, Name, Category ID and UnitPrice. Create ElectricalProduct having the following additional attributes:

VoltageRange and Wattage. Add a behavior to change the Wattage and price of the electrical product. Display the updated ElectricalProduct details.

7. Create Book having following attributes: Book ID, Title, Author and Price.
   Create Periodical which has the following additional attributes: Period (weekly, monthly etc...) .Add a behavior to modify the Price and the Period of the periodical. Display the updated periodical details.

8. Create Vehicle having following attributes: Vehicle No., Model, Manufacturer and Color. Create truck which has the following additional attributes:loading capacity(100 tons…).Add a behavior to change the color and loading capacity. Display the updated truck details.