JAVA PROGRAMS

1. Develop a Java program to create a class **Student** with instance variables usn, name and marks. Create two objects and display the details of the students who have got the highest mark.

2. Develop a Java program to create a class **Actor** with instance variables actorId, actorName, numberOfMovies and earnings. Create three actors and display the details of the actor whose average earning is the minimum.

3. Develop a Java program which creates the class **Circle** that has instance variable radius. Include methods to do the following.

   a. Accept the radius from the user
   b. Find the area of the circle
   c. Find the perimeter of the circle
   d. Display all the details

4. A Multispeciality hospital wants to calculate the bill amount to be paid by patients visiting the hospital. Bill amount includes consultation fees and lab charges.
   Write a java program to implement the class with members- bill_id, patient_name and bill_amount. Include methods of form:

   a. Constructor (billId, patientName)
   b. calculateBillAmount (consultationFees, labCharges)Display the details – billId, patientName and billAmount

   A discount of 10% can be given if the lab charges exceed Rs.2500. 5% Discount can be given if lab charges exceeds Rs.1000/-

5. Develop a Java program to create a class **Employee** with members empId, empName, empNoOfHrs, empBasic, empHRA(%), empDA(%),empIT(%), empGross. Include methods to do the following:

   a. Accept all values from the user. Note House rent allowance, dearness allowance and income tax are given in %
   b. Calculate the gross salary based on the formula
      empGross= empBasic + empBasic*empHRA + empBasic*empDA - empBasic*empIT

   c. Consider the overtime amount to be Rs.100 per hour. If empNoOfHrs >200, for every hour the employee is to be given additional payment. Calculate the additional payment and update the gross. If empNoOfHrs<200, reduce Rs.100 per hour and update the gross.

6. Develop a Java program to create a class **Person** with members – name and age. Derive another class **Patient** with members pid and doctorname. The program should include the following functionalities.

   a. Accept a patient id and display his/her details.
   b. Accept the name of the patient and display the names of the doctor treating him/her.

7. Develop a Java program to create a class TimeDemo with data members – hours and minutes. Include the following methods:

   a. A parameterized constructor to set values to the hours and minutes,
   b. A method 'accept' to accept the values for the members from the user.)
   c. Perform Overloading to add two given times.

Ex. If Time1 has hours=11, minutes=50 and
Time2 has hours =4, minutes =40,
then Time3 should be hours=16, minutes=30

d. A method to display the all the time objects.