1. Write a java program to display the student details (Name, RollNumber, CGPA and Percentage). Percentage should be converted from CGPA using member function. Input will be the total number of students followed by student details in the order of Name, RollNumber and CGPA(Assuming that the name of student has only one word, representing the first name). Output should be the details of all the students in the order Name, RollNumber, CGPA and percentage. Use accessor (setter and getter) methods for accessing the attributes. (Percentage = 9.5*CGPA)

   Sample input:
   Enter number of students: 2
   Student Details Aakash M180562CA 7 Naman M180507CA 8
   Output:
   Aakash M180562CA 7 66.5 % Naman M180507CA 8 76%

2. Create a java program to add and display manager details using hierarchical inheritance Person (name, age) - Emp (name, age, emp_id, salary) - Manager (name, age, emp_id, salary, managing_dep, no_of_employees_working_under)). Input is number of managers followed by manager details in the order name, age, emp_id, salary, managing_dep, no_of_employees_working_under. Output should be the details of all managers in the same order.

   Sample input:
   Enter number of Managers: 2
   Enter details
   Raju 23 LT1202 250000 sales 30
   Aditya 26 LT1203 350000 production 20
   Output:
   Raju 23 LT1202 250000 sales 30
   Aditya 26 LT1203 350000 production 20

3. Create a java program with a class Engine with properties *engine_no* and *cc.* Create another class car with properties engine (object with attributes *engine_no* and *cc*), *color* , *price.* Input car details in the order *engine_no, cc, color, price* and output the details of car (Create object of engine in class car).

   Sample Input:
   Enter car details:
   14245 350 black 700000
   Output:
   14245 350 black 700000

4. Create a class Employee in java with details name and emp_id where emp_id should not be accessible to the outside world but must be accessible in child class (Choose appropriate access specifiers). Store and display employee details using this class. Input is number of employees followed by Employee details in the order name, emp_id. Output is details of all employees in the same order.

   Sample input:
   Enter number of employees 1
   Enter details

Raju LT1202
Output:
Raju LT1202

5. Write a java program with class Account with properties account_holder_name, balance and functions credit(), debit(). There are two subclasses SBI and HDFC which inherit class Account and with an extra function calculate_interest(). For SBI interest is 8% of balance and for HDFC 7% of balance). Input the details of two customers, one HDFC and one SBI, in the order account holder's name, initial balance, credited amount, debited amount. Output is balance and interest of both customers.

   Sample input:
   Enter SBI customer details
   Raju 1000 1500 500
   Enter HDFC customer details
   Aditya 2000 1500 500
   Output:
   Raju 2000 160 Aditya 3000 210

7. Write a Java program to calculate the area and perimeter of a circle, rectangle and square. Your program should contain classes for representing the circle (Attributes: radius) , rectangle (Attributes: length, breadth) and square (Attributes: side). Each class should have respective functions for reading the attributes and for calculating the area and perimeter of the shape. Finally, the program should list all the shapes, which have an area greater than a specified value.

   Sample input and output:
   Enter the number of shapes: 3
   Enter 1 for Circle, 2 for Rectangle, 3 for Square: 1
   Enter Radius : 1
   The area is 3.14 and the perimeter is 6.28
   Enter 1 for Circle, 2 for Rectangle, 3 for Square: 2 Enter Length and Breadth: 5 4
   The area is 20 and the perimeter is 18
   Enter 1 for Circle, 2 for Rectangle, 3 for Square: 3 Enter Side: 2
   The area is 4 and the perimeter is 8
   Enter the threshold value: 15
   The shapes are Rectangle(5,4)

8. Create a menu driven program in java to perform the following operations (Apply compile time polymorphism by assigning the same name for the functions with different number of arguments)
   1. Add two numbers
   2. Add three numbers
   3. -1 * number

   (Check sample input for input and output format).
   Sample input and output:
   a. Add two numbers
      2. Add three numbers
      3. -1 * number
      4. Exit

*****
Enter option: 1
Enter 2 numbers 10 20
Sum is 30 ********
1. Add two numbers
2. Add three numbers
3. -1 * number

d. Exit
*****
Enter option: 2 Enter 3 numbers 10 20 30
Sum is 60 ********
1. Add two numbers
2. Add three numbers
3. -1 * number
4. Exit

*****
Enter option: 2 Enter 3 numbers 10 20 30
Sum is 60 ********
1. Add two numbers
2. Add three numbers
3. -1 * number
4. Exit

*****
Enter option: 4