1. Write a Java program to read 5 subject marks of a student and calculate the total and grade. The grade system is as follows.

Letter Grade	Grade Points	Marks Range
O (Outstanding)	10	91 – 100
A+ (Excellent)	9	81 – 90
A (Very Good)	8	71 – 80
B+ (Good)	7	61 – 70
B (Average)	6	50 – 60
RA	0	< 50

2. Write a java class called 'student' with name, and rollno. Write a class 'Result' to get Marks of 3 subjects and another class "Sports' to get the points obtained in sports. Calculate the total Marks and displays the result (pass or fail) with points obtained in sports for three students using inheritance and constructor.

3. Create an interface "CreditCardInterface" with methods to viewCreditAmount, viewPin, changePin and payBalance. Create a class Customer (name, card number, pin, creditAmount – initialized to 0). Implement methods of the interface "CreditCardInterface" in Customer class. Create an array of customer objects and perform the following actions.
   - Pay Balance
   - Change Pin

4. Write a java program for exception handling:
   a. To create a user defined exception whenever user input the word "hello".
   b. To add two integers and raise exception when any other character except number (0 – 9) is given as input.

5. Create a class Doctor with attributes id, name, age and department. Initialize values through parameterized constructor. If age of Doctor is not in between 25 and 65 then generate user-defined exception "AgeNotWithinRangeException". If name contains numbers or special symbols raise exception "NameNotValidException". Define the two exception classes.

6. Write a Java program 'WordCount' that counts the words in one or more files. Start a new thread for each file. For example, if you call
   "java WordCount report.txt address.txt Homework.java "
   then the program might print
   address.txt: 1052
   Homework.java: 445
   report.txt: 2099

7. Create a new Java GUI application to convert miles to kilometers when pressing the "Convert!" button. Note that you need to implement the ActionListener interface and override the actionPerformed() method. Note that 1 mile is equal to 1.609 kilometers.

8. Develop a course registration form with Name, Address, phone number,Gender(Male or Female),department(user have to select from CSE, ECE,EEE, Mech, Civil) and course (user have to select from (C,C++,JAVA,PYTHON). When the user submits the form, a dialog box should appear with a message "Username , you have successfully enrolled inCourse Name"

9. Write java programs that include generic method to satisfy the following property.
    a. To counts the number of odd integers in an integer list
    b. To exchange the positions of two different elements in an array.

To find the maximal element in the range [begin, end] of a list.

10. Write a Java program to perform the following task.

Take an integer array of size 20, initialize values randomly between 10 and 90, simultaneously sum all values and calculate average. Now separate values below average and above average in ArrayLists. Finally print both lists in 2 separate rows.