X Standard Computer Assignments
2013 – 2014
To be completed by September 2nd week

1. Using if else statement write a program in Java to calculate the grade as per the given criteria:

Percentage marks	Grade
From 75 to 100	Passed with star
From 60 to 74	1st Division
From 40 to 59	2nd Division
Less than 40	Failed

2. Write a program to find the sum of series:
   $3^3 + 4^3 + 5^3 + \ldots N^3$

3. Write a program to input a number n, output the results of the following evaluation based on the number entered by the user.

   i)   Absolute value of the number
   ii) Square root of the number
   iii) Power of the number

4. Write a program to input a character and check if it is a vowel. If not print appropriate message. Use **Switch Case** statement.

5. Write a program to input the number of days for issuing the library book. Calculate the charges according to the following criteria.

Days	Charges
< 5	1.00 Re.
5 and < 8	2.00 Rs.
8 and above	3.50 Rs.

The program should work for n people.

6. Using overloaded functions add(), write a program to take an int array as argument and find the sum of all elements. When with an int array a second argument 'O' or 'E' is passed, it returns the sum of only the odd numbers or even numbers in the array.
If any other character is passed as the second argument then the function will return 0.

7. Write a program in Java to accept two strings. Display the new string by taking each character of the first string from left to right and of the second string from right to left. The letters should be taken alternatively from each string. Assume that the length of both the strings are same.

Eg HISTORY
     SCIENCE
New String: HEICSNTEOIRCYS

8. Write a program in Java to enter a string. Count and display:

i)   Total number of two letter words.

ii)   total number of three letter words

iii) total number of four letter words

Sample input: He that is down needs fear no fall.

Sample output:

Number of two letter words =3

Number of three letter words =0

Number of four letter words =0

9. Kesar Travels Pvt Ltd gives the following discount to its customers:

Ticket amount in Rs

	Discount
Above 70000	18 %
55001 to 70000	16 %
35001 to 55000	12 %
25001 to 35000	10 %
less than 25001	2 %

10.   Write a program to input the name and ticket amount for the customers and calculate the discount amount and net amount to be paid. Display

the output in the following format for each customer. The program should work as long as the user wishes to do so.

Slno. Name   Ticket Chargers   Discount   Net amount

11) The annual examination results of 50 students in a class is tabulated as follows:

Roll no   Subject A   Subject B   Subject C

12. Write a program to read the data into different arrays, calculate and display the following:

a. Average mark obtained by each student

b. Print the roll no. and average marks of the students whose average marks is above 85.

c. Print the roll no. and average marks of the students whose average marks is below 45.

13. Write a program to in put a sentence and print the number of characters found in the longest word of the given sentence.

eg : " India is a democratic country" then the output should be 10.

14. Define a class to overload a function polygon() as follows:

i) void polygon(int n, char ch) : with one integer argument and one character type argument that draws a filled square of side n using the character stored in ch.

ii) void polygon(int x, int y)   : with two integer arguments
that draws a filled rectangle of length x and breadth y,
using the symbol '@'
iii) void polygon ()   : with no argument that draws a
filled triangle shown below.

Example:

i)   output :

ii) Input values of x=2, y=5