

## ASSIGNMENT -6

### PACKAGES AND INTERFACE

1. Write a java program to create a package “Number System” having following classes:
  - a. Factorial class and getfactorial() method
  - b. Prime class and isPrime() method
  - c. Palindrome class and isPalindrome() method
  - d. Stringoperation class and sort() and reverse() method.
2. Write a java program to create a package called “Gujuni” having two sub packages:
  - a. KS
  - b. Rollwala Computer

KS package has two classes KSMBA and KSMSC  
KSMBA provides information about classes (i.e first year to fifth year) and intake (number of students in each year)  
For KSMSC same as mentioned for KSMBA.  
Rollwala Computer has two classes MCA and PGDCA which provides same information like KSMBA.
3. Write a java program to create a package named as calculator, it is having four classes' addition, multiplication, division and subtraction respectively. Use this package in other class named as usercalc.
4. Write a java program to create a main package named as Student, having class named as personal details. Now, create sub package named as StudentMarks, having result as a class. Make use of both the packages in other class named as displayStudent.
5. Write a java program to create an interface called as Shape having method Area().
  - a. Create a class called triangle and implement shape interface to calculate Area
  - b. Create a class called rectangle and implement area method to calculate area of square
  - c. Create a class called circle and perform same operation as performed on above 2 classes.
6. Create an interface called Events having two methods Musicevents and Danceevents. Create a class called Music that implements Musicevents and provide Null implementation for Dance events.  
Create a class called Dance that implements Danceevents and provide Null implementation for Music events.
7. Write a java program to create an interface called “conversion” that has three methods:
  - a. StringtoBinary(int n)
  - b. StringtoOctal(int n)
  - c. StringtoHexa(int n)

Create a class called Conversionclass that will implement above interface and its methods.