# TYCS Java Programming -I Div A

## Practical Assignment – 1 Date :15th July 2019

## Aim:Input output statement, mathematical operations, control structures

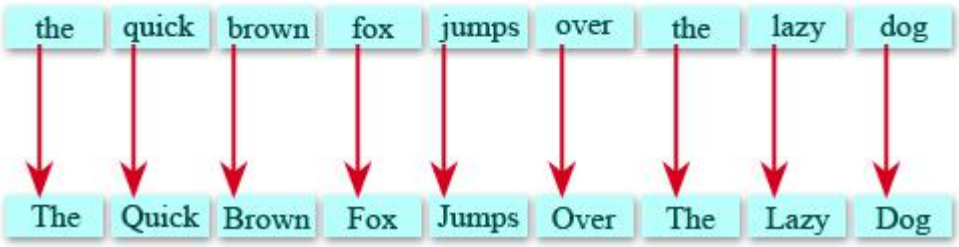
1. Write a java Program to convert days into years
2. Write a java program to find length of string and print second half of the string.
3. Write a java Program to print all prime numbers between 1 to n

# TYCS Java Programming -I Div A

## Practical Assignment – 2 Date:22th July 2019

## Aim: Strings and Array

1. Write a Java program to **capitalize the first letter of each word** in a sentence.




2. Write a Java program to sum values of an array (array values taken from user)

3. Write a Java program to take the last three characters from a given string and add the three characters at both the front and back of the string. String length must be greater than three and more.

Test data: "Python" will be "honPythonhon"
Sample Output:

honPythonhon

4. Write a Java program to sort a given numeric array.
5. Write a Java program to find the second largest and smallest element in an array.

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## Practical Assignment – 2.2 Date:29th July 2019

## Aim: Strings and Array

6. Write a program in JAVA that will accept 10 names from keyboard and sort the same in descending order.

7. Write a java program to print a string entered in a pyramid form. For instance, the string "stream" has to be displayed as follows:

```
        s
      s   t
    s   t   r
  s   t   r   e
s   t   r   e   a
s   t   r   e   a   m
```

**Practice**

Write a program in JAVA that will accept a string and a character. Find the length of the string and also find the difference between first and last occurrence of the given character.

For example: If the string is "practice makes a man perfect" and the search character is 'p' then ,

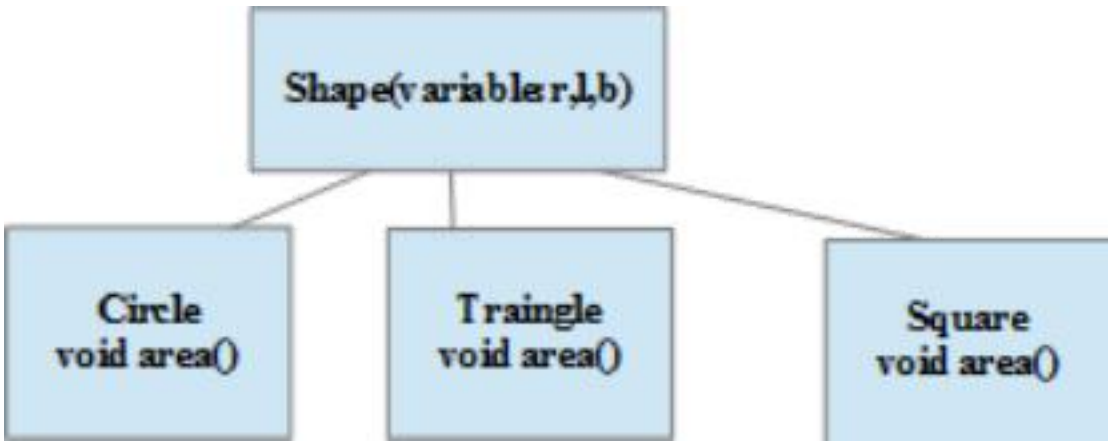
First occurrence of 'p' is at position 1 and last occurrence of 'p is at position 21 then the difference is 21 – 1 = 20.

# TYCS Java Programming -I Div A

## Practical Assignment – 3

## Aim:Inheritance & constructors

1. Write a java program to implement following inheritance. The variables such as r, l, b need to be defined in shape class and further inherited in the sub classes.

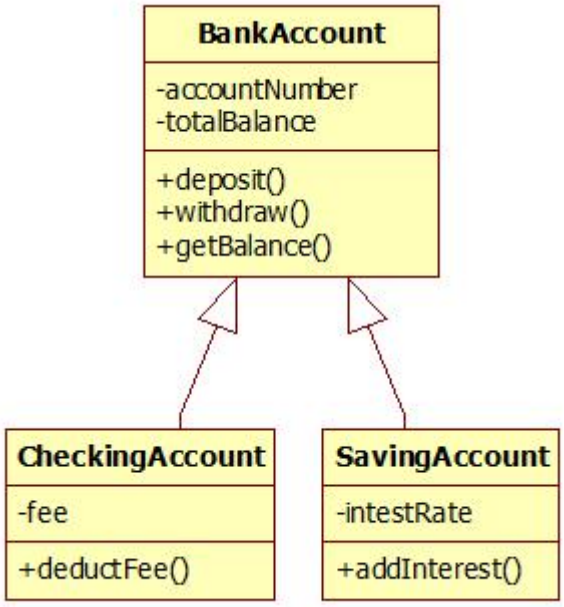



2. Write a java program which overloads constructor of the class **DEPOSIT.** The parameters of the class (principal amount, period, rate of interest) values should be provided at run time through constructors. The user can provide input in one of the following forms(make three constructors):

a. Amount(integer), period(integer) and interest(integer) form
b. Amount(double), period(double) and set rate of interest as default argument.
c. Constructor without parameter.

Calculate and display Simple Interest

3 Write a java program to implement following inheritance to implement following inheritance

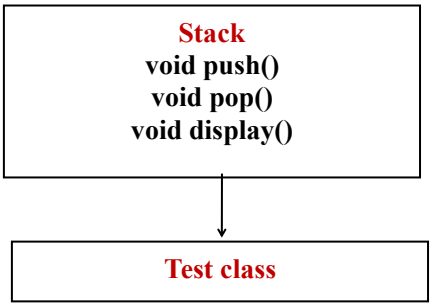


# TYCS Java Programming -I Div A

## Practical Assignment – 4

## Aim:Abstract class & Interface in Java

1. Write a java program to create abstract class called **stack**. Create another class to inherits abstract class stack to implement stack.



2. Write a java program to create **abstract class called Shape** which has **three subclasses say Triangle, Rectangle and Circle.** Define one **method area() in the abstract class** and override this area() in these three subclasses to calculate for specific object as follows

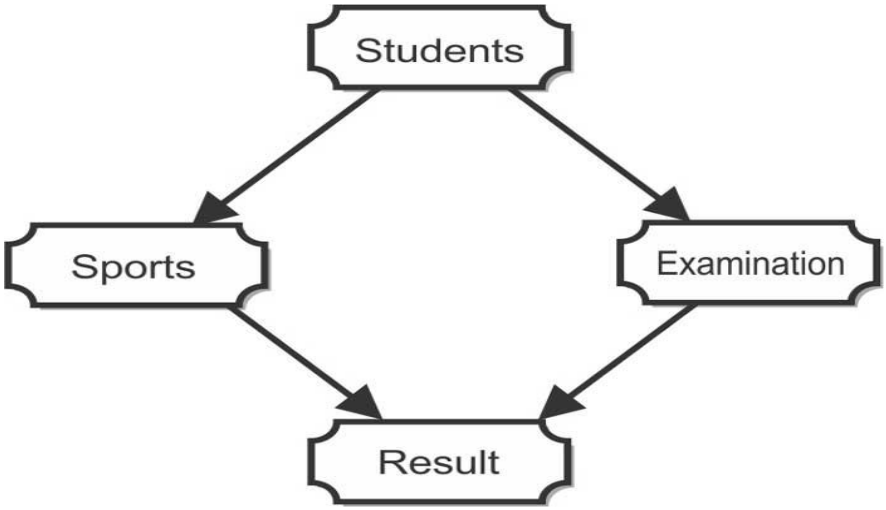
Example :

area() of Triangle subclass should calculate area of Triangle.

area() of Rectangle subclass should calculate area of Rectangle.

area() of Circle subclass should calculate area of Circle .

3. Write a java program to implements following inheritance for N number of students:




The student class should collect student information such as Examno, student name. The Examination class should contain information about marks of 3 subjects out of 20. Also, it calculate whether student is pass or fail in individual subject and in all subjects. The sports class displays information about various saptdhara, NSS and NCC activities if student is involve in. **The Result class displays the overall details of the students.**

## TYCS Java Programming -I
## Practical Assignment – 5
## Aim:Package in Java

1 Assume that there are two packages, student and exam. A student package contains Student class and the exam package contains Result class. Write a program that generates mark sheet for students.

2. Write a java program to create two packages: **InsertStudName** and **SortStudName.** The InsertStudName package contain Student class to accept name of students depending on the N entered by the user.

The SortStudName package contains SortName class to sort the names in ascending order .

Write a code that generates student names in ascending order.

## TYCS Java Programming -I
## Practical Assignment – 6
## Aim:Exception Handling in java

**1.** Write a program in Java to develop **user defined exception for 'Divide by Zero' error.**

2. Write a java program to take age,name,address from user. If user enter age less than 18 throw **user defined exception "invalid age exception"**, and if the age is greater than 18 display message "registration successfully done".

3. Write an small application in Java to develop Banking Application in which user deposits the amount Rs 1000.00 and then start withdrawing of Rs 400.00, Rs 300.00 and it **throws user defined exception "Not Sufficient Fund"** when user withdraws Rs. 500 thereafter.

## TYCS Java Programming -I
## Practical Assignment – 7
## Aim:Command line argument

1.Write a Java application to count and display frequency of letters and digits from the string given by user as command-line argument.

2Write a java program to find the sum and average of the N numbers when N is taken as input using command line argument.

2.Write a java program to find prime numbers between a given range where starting and ending range is taken from user using command line argument.