PGM !

package math;

public class Calculation{

/\*\* The calulation class implements,the basic operation such as addtion ,subtraction,

multiplication and division . These are created inside the user defined package called math.

@author aumrudh

@since 2019-12-19

\*/

//add method simply add two integers and return

public int add(int x, int y){

return x+y;

}

//sub method calculate the differance and return

public int sub(int x, int y){

return x-y;

}

//mul method calculate the product and return

public int mul(int x, int y){

return x\*y;

}

//div method returns the quotient of two integers

public int div(int x, int y){

return x/y;

}

}

package test;

import math.Calculation;

import java.util.Scanner;

public class Sample{

/\*\* The Sample class is used to invoke the method of math package and do the respective

operation . This is done in package called test.\

@author aumrudh

@since 2019-12-19

\*/

public static void main(String args[]){

Calculation obj=new Calculation();

Scanner input=new Scanner(System.in);

System.out.print("Enter value of a : ");

int a =input.nextInt();

System.out.print("Enter value of b : ");

int b =input.nextInt();

int ans=0;

ans=obj.add(a,b);

System.out.println("Sum is "+ans);

ans=obj.sub(a,b);

System.out.println("Differance is "+ans);

ans=obj.mul(a,b);

System.out.println("Product is "+ans);

ans=obj.div(a,b);

System.out.println("Quotient is "+ans);

}

}

imaumrudh@Aumrudh-PC:~/java/ex2/pgm1/test$ java Sample.java

Enter value of a : 50

Enter value of b : 5

Sum is 55

Differance is 45

Product is 250

Quotient is 10

PGM 2

package mypack;

class Student{

/\*\* The mypack package contains student class. It has roll number as field name/

It also has getter and setter methods for rollnumber

@author aumrudh

@since 2019-12-19

\*/

private int rollNumber;

//Getter method for rollNumber

public int getNumber(){

return rollNumber;

}

//Setter method for rollNumber

public void putNumber(int rollNumber){

this.rollNumber=rollNumber;

}

}

public class Test extends Student{

/\*\* The class test is the extension of calss student. In addition it has mark as array

and getter and setter methods is there.

\*/

private int mark[]=new int[5];

//Getter method for marks

public int getMark(int i){

return mark[i];

}

//Setter method for marks

public void putMark(int[] mark){

this.mark=mark;

}

}

package mypack1;

import mypack.\*;

import java.util.Scanner;

public class Sport{

/\*\*

This package is used to check the user defined package mypack. Here sport class is defined

which has total and sport name. It has getter for sport name and display method.

\*/

private int total;

public static void main(String args[]){

Scanner input=new Scanner(System.in);

Test obj=new Test();

//Getting roll number as input

System.out.print("Enter Roll number : ");

int r=input.nextInt();

//Getting all 5 marks as input

System.out.print("Enter 5 Marks : ");

int ma[]=new int[5];

for(int i=0;i<5;i++){

ma[i]=input.nextInt();

}

//Putting the rollnumber , mark in object created

obj.putNumber(r);

obj.putMark(ma);

Sport s=new Sport();

for(int i=0;i<5;i++){

s.total=s.total+obj.getMark(i);

}

System.out.println("Roll Number : "+obj.getNumber());

System.out.println("Marks are : ");

for(int i=0;i<5;i++){

System.out.println(obj.getMark(i));

}

s.display();

}

public void display(){

System.out.println("Total : "+total);

}

}

Enter Roll number : 34 Enter 5 Marks : 100 100 100 100 100 Roll Number : 34 Marks are :

100

100

100

100

100

Total : 500

PGM 3

package india;

public class Team{

/\*\* The package has class team and three fields .

\* It has Constructor to initalize and also display method to dispaly.

\* @author aumrudh

\* @since 2019-12-19

\*/

private String playerName;

private int position;

private String nickName;

public Team(String playerName,int position,String nickName){

this.playerName=playerName;

this.position=position;

this.nickName=nickName;

}

public void display(){

System.out.println("Player Name : "+playerName);

System.out.println("Player Position : "+position);

System.out.println("Player NickName : "+nickName);

}

}

package pack;

import java.util.Scanner;

import india.Team;

public class Test{

/\*\* Here the pack package is used to demonstrate the working of

\* team class in package india. Here object is created and constructor

\* is invoked.

\* @author aumrudh

\* @since 2019-12-19

\*/

public static void main(String[] args){

Scanner input=new Scanner(System.in);

System.out.print("Enter Player Name : ");

String a=input.next();

System.out.print("Enter Player Position : ");

int r=input.nextInt();

System.out.print("Enter Player NickName : ");

String b=input.next();

Team obj = new Team(a,r,b);

obj.display();

}

}

imaumrudh@Aumrudh-PC:~/java/ex2/pgm3/pack$ java Test.java

Enter Player Name : Aumrudh

Enter Player Position : 4

Enter Player NickName : Lal

Player Name : Aumrudh

Player Position : 4

Player NickName : Lal

PGM 4

package password;

import java.lang.Character;

import java.lang.String;

public class Password{

/\*\* The Package has Password class which will have only one method.

\* The check password method will check the string wheather it has

\* atleast 6 characters , 3 digits and uppercase characters or digits.

\* @author aumrudh

\* @since 2019-12-19

\*/

public int checkPassword(String S){

if((S.length())<6){

return 0;

}

int count=0,flag=0;

char c;

for(int i=0;i<S.length();i++){

c=S.charAt(i); //return character at position 'i'

if(Character.isDigit(c)){

count++;

}

}

if(count<3){

return 0;

}

for(int i=1;i<S.length();i++){

c=S.charAt(i);

if(Character.isDigit(c) || Character.isUpperCase(c)){

flag=1; //if uppercase or digit then set flag=1 else flag=0

}

else

flag=0;

}

if(flag==0){

return 0; //if false return 0

}

return 1; //if all are satisfied then return 1

}

}

package test;

import password.Password;

import java.util.Scanner;

public class Test{

/\*\* This class test will be used for checking the password got from user.

\* Check and tell wheather it is a valid or invalid password.

\*/

public static void main(String args[]){

Scanner ip = new Scanner(System.in);

System.out.print("Enter a password : ");

String pass=ip.next(); //getting password as input

Password obj=new Password(); //Creating object for Password class

int ans;

ans=obj.checkPassword(pass); //passing input string to method

if(ans==1){//if valid

System.out.println("Valid Password");

}

else{

System.out.println("Invalid Password");

}

}

}

imaumrudh@Aumrudh-PC:~/java/ex2/pgm4/test$ java Test.java

Enter a password : AUMRUDH@%)#

Invalid Password

imaumrudh@Aumrudh-PC:~/java/ex2/pgm4/test$ java Test.java

Enter a password : AUMRUDH2503

Valid Password