Exp1

package Factorial;

import java.util.\*;

import java.lang.\*;

public class Main

{

public static void main(String[] args) {

Scanner in=new Scanner(System.in);

System.out.print("Enter the no: ");

int n=in.nextInt();

int fact=1;

for(int i=1;i<=n;i++) {

fact=fact\*i;

}

System.out.println("Factorial is: " + fact);

}

}

package prime;

public class Main {

public static void main(String[] args) {

int count = 0; // Count of primes found

int num = 2; // Number to check for prime status

System.out.println("First 50 Prime Numbers:");

while (count < 50) {

boolean isPrime = true;

for (int i = 2; i <= num/2; i++) {

if (num%i == 0) {

isPrime = false;

break;

}

}

if (isPrime) {

System.out.print(num + " ");

count++;

}

num++;

}

}

}

package sum&avg;

import java.util.Scanner;

public class Main

{

public static void main(String[] args) {

Scanner in = new Scanner(System.*in*);

double sum=0, avg;

int n, num;

System.*out*.print("No of values: ");

n = in.nextInt();

for( int i = 1; i<= n; ++i){

System.*out*.print("Enter the No: ");

num = in.nextInt();

sum += num;

}

avg = sum/n;

System.*out*.println("Sum of is "+ sum);

System.*out*.println("Avg of is "+ avg);

}

}

Exp2

package calculator;

import java.util.Scanner;

class Calculatorclass {

private double n1,n2;

public void getFirstNo(){

System.*out*.print("Enter the first number: ");

Scanner in=new Scanner(System.*in*);

n1=in.nextDouble();

}

public void getSecondNo(){

System.*out*.print("Enter the second number: ");

Scanner in=new Scanner(System.*in*);

n2=in.nextDouble();

}

public double addition(){

return(n1+n2);

}

public double subtract(){

return(n1-n2);

}

public double multiply(){

return(n1\*n2);

}

public double division(){

return(n1/n2);

}

public double factorial(){

double fact=1;

for(int i=1;i<=n1;i++)

fact=fact\*i;

return fact;

}

}

public class CalcClass{

public static void main(String[] args) {

Calculatorclass obj=new Calculatorclass ();

Scanner in=new Scanner(System.*in*);

int choice;

do{

System.*out*.println(" 1.Addition\n 2.Substaction\n 3.Multiplication\n 4.Division\n 5.Factorial");

System.*out*.print("Enter the choice: ");

int ch=in.nextInt();

switch(ch){

case 1: obj.getFirstNo();

obj.getSecondNo();

System.*out*.println("Result is: " + obj.addition());

break;

case 2: obj.getFirstNo();

obj.getSecondNo();

System.*out*.println("Result is: " + obj.subtract());

break;

case 3: obj.getFirstNo();

obj.getSecondNo();

System.*out*.println("Result is: " + obj.multiply());

break;

case 4: obj.getFirstNo();

obj.getSecondNo();

System.*out*.println("Result is: " + obj.division());

break;

case 5: obj.getFirstNo();

System.*out*.println("Result is: " + obj.factorial());

break;

default:

}

System.*out*.println("Do U want to continue 1 or 0?");

choice=in.nextInt();

}while(choice==1);

}

}

Exp3

package rectangles;

import java.util.\*;

public class Rect {

double length,width,area;

String color;

Scanner s=new Scanner(System.*in*);

void get\_length()

{

System.*out*.print("Enter length: ");

length=s.nextDouble();

}

void get\_width()

{

System.*out*.print("Enter width: ");

width=s.nextDouble();

}

double find\_area()

{

area=length\*width;

return(area);

}

String get\_colour()

{

System.*out*.print("Enter color: ");

color=s.next();

return(color);

}

public static void main(String[]args)

{

Rect R1=new Rect();

Rect R2=new Rect();

System.*out*.println("Enter the details for 1st rectangle");

R1.get\_length();

R1.get\_width();

String str1=R1.get\_colour();

System.*out*.println("\nEnter the details for 2nd rectangle");

R2.get\_length();

R2.get\_width();

String str2=R2.get\_colour();

if(R1.find\_area()==R2.find\_area()&& (str1.equals(str2))){

System.*out*.println("Matching Rectangle");

}

else

{

System.*out*.println("Not matching Rectangles");

}

}

}

Exp4

package add;

class Addition{

double num1, num2, num3;

Addition(double a, double b, double c){

num1 = a;

num2 = b;

num3 = c;

}

Addition(double a, double b){

num1 = a;

num2 = b;

}

Addition(){

num1=num2=num3 = 0;

}

Addition(double value){

num1=num2=num3= value;

}

double add(){

return num1+num2+num3;

}

double add(double num1,double num2){

return num1+num2;

}

public static void main(String args[]){

Addition sum1 = new Addition(10,20,50);

Addition sum2 = new Addition();

Addition sum3 = new Addition(7);

Addition sum4 = new Addition(7,101);

double total;

total = sum1.add();

System.*out*.println(" Addition is: " + total);

total = sum2.add();

System.*out*.println(" Addition is: " + total);

total = sum3.add();

System.*out*.println(" Addition is: " + total);

total = sum4.add();

System.*out*.println(" Addition is: " + total);

}

}

Exp5

package sorting;

import java.util.Scanner;

class Sort {

void sortInteger(int a[]) {

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

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

if (a[i] > a[j]) {

int temp = a[i];

a[i] = a[j];

a[j] = temp;

}

}

}

}

void sortString(String str[]) {

String temp;

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

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

if (str[i].compareTo(str[j]) > 0) {

temp = str[i];

str[i] = str[j];

str[j] = temp;

}

}

}

}

}

public class Main {

public static void main(String[] args) {

Sort obj = new Sort();

Scanner in = new Scanner(System.*in*);

int choice;

do {

System.*out*.println(" 1.Sort Integer\n 2.Sort String");

System.*out*.println("Enter the choice");

int ch = in.nextInt();

switch (ch) {

case 1:

System.*out*.println("Enter the size of Array ");

int n = in.nextInt();

System.*out*.println("Enter the Numbers :");

int arr[] = new int[n];

for (int i = 0; i < n; i++)

arr[i] = in.nextInt();

obj.sortInteger(arr);

System.*out*.println("Sorted Numbers :");

for (int i = 0; i < n; i++)

System.*out*.print(arr[i] + " ");

break;

case 2:

String names[] = { "ram", "shyam", "seeta", "geeta", "reeta" };

obj.sortString(names);

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

System.*out*.print(names[i] + " ");

break;

}

System.*out*.println("\nDo U want to continue 1 or 0?");

choice = in.nextInt();

} while (choice == 1);

}

}

Exp6

package matrixadd;

import java.util.\*;

public class Addition {

public static void main(String[] args) {

Scanner sc = new Scanner(System.*in*);

// Input the dimensions of the matrices

System.*out*.print("Enter the number of rows: ");

int rows = sc.nextInt();

System.*out*.print("Enter the number of columns: ");

int cols = sc.nextInt();

// Initialize matrices

int[][] matrix1 = new int[rows][cols];

int[][] matrix2 = new int[rows][cols];

int[][] sumMatrix = new int[rows][cols];

// Input elements of the first matrix

System.*out*.println("Enter elements of the first matrix:");

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

for (int j = 0; j < cols; j++) {

matrix1[i][j] = sc.nextInt();

}

}

// Input elements of the second matrix

System.*out*.println("Enter elements of the second matrix:");

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

for (int j = 0; j < cols; j++) {

matrix2[i][j] = sc.nextInt();

}

}

// Add the matrices

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

for (int j = 0; j < cols; j++) {

sumMatrix[i][j] = matrix1[i][j] + matrix2[i][j];

}

}

// Display the resulting matrix

System.*out*.println("Resulting Matrix after addition:");

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

for (int j = 0; j < cols; j++) {

System.*out*.print(sumMatrix[i][j] + " ");

}

System.*out*.println();

}

}

}

Exp7

package Inheritance;

import java.util.Scanner;

class Player{

String name;

int age;

String gameName;

int noOfGamesPlayed;

String address;

String type;

Scanner in=new Scanner(System.*in*);

void getDetails(){

System.*out*.println("Enter the details Name, Age, Address, Name of Game, No of Games Played and Type ");

name=in.nextLine();

age=in.nextInt();

in.nextLine();

address=in.nextLine();

gameName=in.nextLine();

noOfGamesPlayed=in.nextInt();

in.nextLine();

type=in.nextLine();

}

void display(){

System.*out*.println("Name: "+ name + " Age: " + age + " Game Name: " + gameName + " Total Matches: " + noOfGamesPlayed + " Address: " + address + " International or National: " + type );

}

}

class Cricket\_Player extends Player{

int totalRuns;

int totalWickets;

void getDetails(){

super.getDetails();

System.*out*.println("Enter the Total Runs and Wickets: ");

totalRuns=in.nextInt();

totalWickets=in.nextInt();

}

void display(){

super.display();

System.*out*.println("Total Runs: " + totalRuns + " Total Wickets: " + totalWickets);

}

}

class FootBall\_Player extends Player{

int noOfGoals;

void getDetails(){

super.getDetails();

System.*out*.println("Enter the total no of Goals: ");

noOfGoals=in.nextInt();

}

void display(){

super.display();

System.*out*.println("Total Goals: " + noOfGoals);

}

}

class Hockey\_Player extends Player{

int noOfGoals;

void getDetails(){

super.getDetails();

System.*out*.println("Enter the total no of Goals: ");

noOfGoals=in.nextInt();

}

void display(){

super.display();

System.*out*.println("Total Goals: " + noOfGoals);

}

}

public class InheritanceClass {

public static void main(String[] args) {

Cricket\_Player cp=new Cricket\_Player();

cp.getDetails();

cp.display();

FootBall\_Player fp=new FootBall\_Player();

fp.getDetails();

fp.display();

Hockey\_Player hp=new Hockey\_Player();

hp.getDetails();

hp.display();

}

}

Exp8

Program1

package pkgproj;

public class packageclass {

public int x,y;

public void display(){

System.*out*.println("Welcome to package project-packageclass");

}

public int add(int x, int y){

return(x+y);

}

}

Program2

package mypkg;

import pkgproj.\*;

public class mypackageclass {

public static void main(String args[]){

packageclass p1=new packageclass();

p1.display();

System.*out*.println("Addition is "+p1.add(10,20));

}

}

Exp9

package usinginterface;

interface area{

final static float *pi*=3.14f;

float compute(float x, float y);

}

public class interfaceclass implements area{

public float compute(float x, float y) {

return(*pi*\*x\*y);

}

public static void main(String []args){

interfaceclass p1=new interfaceclass();

System.*out*.println("Area= "+p1.compute(20.00f,20.0f));

}

}

Exp10

package exceptionhandling;

import java.util.\*;

public class Main {

public static void main (String args[]) {

Scanner sc=new Scanner(System.*in*);

try {

System.*out*.print("Enter the numerator: ");

int n = sc.nextInt();

System.*out*.print("Enter the denominator: ");

int d = sc.nextInt();

int result = n/d;

System.*out*.println("Result: " + result);

} catch (ArithmeticException e) {

System.*out*.println("Error: Cannot divide Zero");

}

}

}

Exp11

import java.applet.Applet;

import java.awt.Color;

import java.awt.Graphics;

public class AppletClass extends Applet {

@Override

public void paint(Graphics g) {

setBackground(Color.white);

g.setColor(Color.yellow);

g.fillOval(100, 100, 200, 200);

g.setColor(Color.black);

g.fillOval(140, 150, 30, 40);

g.fillOval(230, 150, 30, 40);

g.setColor(Color.red);

g.drawArc(150, 200, 100, 50, 0, -180);

}

}

import java.awt.\*;

import java.applet.Applet;

public class NewApplet extends Applet {

@Override

public void paint(Graphics g) {

g.setColor(Color.BLUE);

g.drawRect(50, 50, 100, 50); // x, y, width, height

g.setColor(Color.RED);

g.drawOval(200, 50, 100, 50); // x, y, width, height

g.setColor(Color.GREEN);

g.drawLine(50, 150, 300, 150); // x1, y1, x2, y2

g.setColor(Color.MAGENTA);

g.drawString("Hello, Graphics!", 100, 250); // text, x, y

}

}

Exp12

import java.io.File;

import java.io.FileWriter;

import java.io.FileReader;

import java.io.IOException;

public class FileHandling {

public static void main(String[] args) {

String data = "This is the data in the output file";

// Step 1: Creating and writing to the file

try {

// Create the file

File obj = new File("myfile.txt");

if (obj.createNewFile()) {

System.out.println("File Created!");

} else {

System.out.println("File already exists.");

}

// Write data to the file

FileWriter output = new FileWriter(obj);

output.write(data);

output.close();

System.out.println("Data is written to the file.");

} catch (IOException e) {

System.out.println("An error occurred while creating/writing the file.");

e.printStackTrace();

}

// Step 2: Reading from the file

try {

FileReader input = new FileReader("myfile.txt");

char[] array = new char[100];

input.read(array);

input.close();

System.out.println("Data in the file:");

System.out.println(array);

} catch (IOException e) {

System.out.println("An error occurred while reading the file.");

e.printStackTrace();

}

}

}