Institute of Distance and Open Learning

(IDOL)

**University of Mumbai**



Certificate

This is to certify that Mr. Pralhad Sahantaram pawar of **S.Y.MCA**  Semester 4 has completed the specified term work in the subject of Java Programming in satisfactorily manner within this institute as laid down by University of Mumbai during the academic year 2018 to 2019.

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Examiner

Date: College Seal

Institute of Distance and Open Learning (IDOL)

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Date: College Seal

**PRACTICAL NO. 1**

**AIM: - Program to reverse the digits of the no.**

**PROGRAM:**

import java.io.\*;

public class reverse

{

public static void main (String args[])

{

DataInputStream in=new DataInputStream(System.in);

int n=0,rev=0,rem=0;

try

{

System.out.printin("Enter number:");

n=Integer.parseInt(in.readLine());

}

catch (Exeption f)

{}

while (n>0)

{

rem=n%10;

rev=rev\*10+rem;

n=n/10;

}

System.out.println("\n\t Rev No="+rev);

}

**OUTPUT**:

Enter the no.

12345

Reverse no.

54321

**PRACTICAL NO. 2**

**AIM: - Program to calculate & print the first m Fibonacci numbers.**

**PROGRAM:**

import java.io.\*;

public class fibo

{

public static void main(String args[])

{

DataInputStream in=new DataInputStream(System.in);

int iFibOne = 0, iFibTwo = 1;

try

{

System.out.println("Fibonacci series printing ...... ");

System.out.println(iFibOne + "," + iFibTwo + ",");

}

catch(Exception e)

{}

do

{

int cur = iFibOne + iFibTwo;

iFibOne = iFibTwo;

iFibTwo = cur;

System.out.println(cur + ",");

}

while(iFibTwo < 100);

}

}

**OUTPUT**:

Fibonacci series printing........

0,

1,

1,

2,

3,

5,

8,

13,

21,

34,

55,

89,

144

**PRACTICAL NO. 3**

**AIM: - Program to compute the sum of the digits of a given integer number.**

**PROGRAM:**

import java.io.\*;

class sum

{

public static void main(String args[])

{

DataInputStream in=new DataInputStream(System.in);

int num=0,sum=0;

try

{

System.out.println("Enter number:");

num=Integer.parseInt(in.readLine());

}

catch (Exception e)

{}

while (num > 0)

{

sum += num % 10;

num /= 10;

}

System.out.println("\n\t Sum of the numbers="+sum);

}

}

**OUTPUT**:

Enter number:

12345

Sum of the number=15

**PRACTICAL NO. 4**

**AIM: - Program to arrange Minal, Pooja, Shama, Geeta, Meeta, Mohan in ascending order.**

**PROGRAM:**

class StringOrdering

{

static String name[]={"Minal","Pooja","Shama","Geeta","Meeta","Mohan"};

public static void main(String args[])

{

int size=name.length;

String temp=null;

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

{

for(int j=i+1;j<size;j++)

{

if((name[j].compareTo(name[i]))<0)

{

temp=name[i];

name[i]=name[j];

name[j]=temp;

}

}

}

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

{

System.out.println(name[i]);

}

}

}

**OUTPUT**:

Geeta

Meeta

Minal

Mohan

Pooja

Shama

**PRACTICAL NO. 5**

**AIM: - Program to multiply two matrices.**

**PROGRAM:**

class matrix

{

public static void main(String[] args)

{

int array[][] = {{5,6,7},{4,8,9}};

int array1[][] = {{6,4},{5,7},{1,1}};

int array2[][] = new int[3][3];

int x= array.length;

System.out.println("Matrix 1 : ");

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

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

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

}

System.out.println();

}

int y= array1.length;

System.out.println("Matrix 2 : ");

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

for(int j = 0; j < y-1; j++) {

System.out.print(" "+array1[i][j]);

}

System.out.println();

}

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

for(int j = 0; j < y-1; j++) {

for(int k = 0; k < y; k++){

array2[i][j] += array[i][k]\*array1[k][j];

}

}

}

System.out.println("Multiply of both matrix : ");

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

for(int j = 0; j < y-1; j++) {

System.out.print(" "+array2[i][j]);

}

System.out.println();

}

}

}

**OUTPUT**:

Matrix 1:

5 6 7

4 8 9

Matrix2:

6 4

5 7

1 1

Multiply of both matrix:

67 69

73 81

**PRACTICAL NO. 6**

**AIM: - Program using packages.**

**PROGRAM:**

**A.java**

package pack1;

public class A {

public void display() {

System.out.println("\n\t class A");

}

}

**B.java**

package pack2;

public class B {

public void displayB() {

int a=10,b=20;

System.out.println("Add="+(a+b));

}

}

**Packagetest.java**

import pack1.\*;

import pack2.\*;

class packagetest {

public static void main(String args[])

{

A a1=new A();

B b1=new B();

a1.display();

b1.displayB();

}

}

**OUTPUT:**

Class A

Add=30

**PRACTICAL NO. 7**

**AIM: - Program to print Floyd’s triangle.**

**1**

**2 3**

**4 5 6**

**7 …… ……..10**

**11 ………………..15**

**.**

**.**

**79………………………….91\*/**

**PROGRAM:**

import java.io.\*;

public class pyramid{

public static void main(String args[])

{

int i=1,j;

int num = 1;

while(num<=91)

{

for(j=1; j<=i; j++){

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

num++;}

i++;

System.out.print("\n");

}

}

}

**OUTPUT:**

1

2 3

4 5 6

7 8 9 10

11 12 13 14 15

16 17 18 19 20 21

22 23 24 25 26 27 28

29 30 31 32 33 34 35 36

37 38 39 40 41 42 43 44 45

46 47 48 49 50 51 52 53 54 55

56 57 58 59 60 61 62 63 64 65 66

67 68 69 70 71 72 73 74 75 76 77 78

79 80 81 82 83 84 85 86 87 88 89 90 91

**PRACTICAL NO. 8**

**AIM: - program to produce the following form of Floyd’s triangle.**

**1**

**0 1**

**1 0 1**

**0 1 0 1**

**0 1 0 1**

**PROGRAM:**

class sam {

public static void main(String args[])

{

int a=1;

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

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

if(a==0)

{

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

}

else

{

System.out.print(" "+a--);

}

}

System.out.print("\n");

}

}

}

**OUTPUT**:

1

0 1

0 1 0

1 0 1 0

1 0 1 0 1

**PRACTICAL NO. 9**

**AIM: - Program to generate a Triangle.**

**1**

**2 2**

**3 3 3**

**4 4 4 4 and so on as per user given number**

**PROGRAM:**

import java.io.\*;

public class triangle1 {

public static void main(String args[])

{

DataInputStream in=new DataInputStream(System.in);

int num=0;

try {

System.out.println("Enter number:");

num = Integer.parseInt(in.readLine());

}

catch(Exception e) {}

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

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

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

}

System.out.print("\n");

}

} }

**OUTPUT**:

Enter number:

5

1

22

333

4444

55555

**PRACTICAL NO. 10**

**AIM: - Program using Methodoverloading.**

**PROGRAM:**

class student

{

int roleno;

String name;

float sub1,sub2,sub3=0;

student( float s1,float s2,float s3 )

{

sub1=s1;

sub2=s2;

sub3=s3;

}

student( float s1,float s2)

{

sub1=s1;

sub2=s2;

}

float total()

{

return(sub1+sub2+sub3);

}

float per()

{

return total()/3;

}

}

class methodover

{

public static void main (String[]args)

{

student s1=new student(20,30,40);

System.out.println("the total marks of S.S.C. =" + s1.per());

System.out.println("the total marks of S.S.C. =" + s1.total());

student s2=new student(10,50,0);

System.out.println("the total marks of H.S.C. =" + s2.total());

System.out.println("the total marks of H.S.C. =" + s2.per());

}

}

**OUTPUT**:

the total marks of S.S.C. =30.0

the total marks of S.S.C. =90.0

the total marks of H.S.C. =60.0

the total marks of H.S.C. =20.0

**PRACTICAL NO. 11**

**AIM: - Program using Inheritance.**

**PROGRAM:**

class staff

{

int code;

String name;

staff( int a,String na)

{

code=a;

name=na;

}

};

class teacher extends staff

{

String subject;

String publication;

teacher( String sub, String pub,int a, String na)

{

super(a,na);

subject=sub;

publication=pub;

}

};

class typist extends staff

{

public int speed;

typist(int d,int a,String na)

{

super(a,na);

speed=d;

}

};

class officer extends staff

{

String grade;

officer( String g,int a,String na)

{

super(a,na);

grade=g;

}

};

class regular extends typist {

int salary;

regular (int sal,int d)

{

super(1,1,"k");

salary=sal;

}

};

class causal extends typist

{

int wages;

causal( int w,int d )

{

super(1,1,"k");

wages=w;

//speed=d;

}

};

class employee {

public static void main (String[] args) {

teacher t=new teacher( "navnit","math",20,"rutuja");

System.out.print( " \n the details of teacher " );

System.out.print( " \n the name of subject is = " + t.subject);

System.out.print( " \n the name of publication is = " + t.publication );

System.out.print( " \n the name of employee = " + t.name);

System.out.print( " \n the code of employee = " + t.code);

System.out.print( " \n ------------------------------------------");

officer obj = new officer( "A",30,"roshan");

System.out.print( " \n the details of officer " );

System.out.print( " \n the grade of subject is = " + obj.grade);

System.out.print( "\n the name of employee = " + obj.name);

System.out.print( " \n the code of employee = " + obj.code);

System.out.print( " \n ------------------------------------------");

regular obj1= new regular(2000,30);

System.out.print( " \n the details of regular typist " );

System.out.print( " \n the salary of employee = " + obj1.salary);

System.out.print( " \n the speed of employee = " + obj1.speed);

causal obj3 = new causal(50,300);

System.out.print( " \n ------------------------------------------");

System.out.print( " \n the details of causal typist " );

System.out.print( " \n the daily wage of an employee = " + obj3.wages);

System.out.print( " \n the speed of employee = " + obj3.speed);

}

}

**OUTPUT**:

The details of teacher

The name of subject is = Maths

The name of publication is = Navneet

The name of employee = Rutuja

The code of employee = 20

------------------------------------------

The details of officer

The grade of subject is = A

The name of employee = Roshan

The code of employee = 30

------------------------------------------

The details of regular typist

The salary of employee = 2000

The speed of employee = 1

------------------------------------------

The details of causal typist

The daily wage of an employee = 50

The speed of employee = 1

**PRACTICAL NO. 12**

**AIM: - Program to print a following pattern.**

**\***

**\*\*\***

**\*\*\*\*\***

**\*\*\*\*\*\*\***

**\*\*\*\*\***

**\*\*\***

**\***

**PROGRAM:**

class Pattern

{

public static void main(String args[])

{

int i,j,k,m=8,m1=0;

for(i=1;i<5;i++)

{

for(k=0;k<m;k++)

{

System.out.print(" ");

}

for(j=1;j<i;j++)

{

System.out.print("\*");

}

for(j=1;j<i-1;j++)

{

System.out.print("\*");

}

m=m-1;

System.out.println("");

}

for(i=5;i>1;i--)

{

for(k=4;k>m1;k--)

{

System.out.print(" ");

}

for(j=i;j>1;j--)

{

System.out.print("\*");

}

for(j=i-1;j>1;j--)

{

System.out.print("\*");

}

m1=m1-1;

System.out.println("");

}

}

}

**OUTPUT**:

\*

\*\*\*

\*\*\*\*\*

\*\*\*\*\*\*\*

\*\*\*\*\*

\*\*\*

\*

**PRACTICAL NO. 13**

**AIM: - Program for Bank Account.**

**PROGRAM:**

import java.io.\*;

class Account {

String Name,TypeAc;

int Acno;

float Bal=10000;

void Getdata(String nm,int aat,String tat)

{

Name=nm;

Acno=aat;

TypeAc=tat;

}

void Deposite(float at) {

Bal=Bal+at;

System.out.println("\n Amout Deposited "+at);

System.out.println("\n Current Balance = " +Bal);

}

void WithDraw(float dr)

{

if(Bal<dr)

{

System.out.println("\n Cannot Wthdraw As balance is Insufficient");

}

else

{

Bal=Bal-dr;

System.out.println("\n Amount Withdrwn is "+dr);

System.out.println("\n Curent Balance = " +Bal);

}

}

void Display()

{

System.out.println("\n Name Of Customer : "+Name);

System.out.println("\n Balance Amount :"+Bal);

}

}

class Bank

{

public static void main(String args[])

{

Account A1=new Account();

DataInputStream in=new DataInputStream(System.in);

BufferedReader reader=new BufferedReader(new InputStreamReader(System.in));

String n,ta;

float amt,draw;

int an,m;

try

{

System.out.println("\nEnter The Name Of Customer");

n=in.readLine();

System.out.println("\nEnter The Account Number Of Customer");

an=Integer.parseInt(in.readLine());

System.out.println("\nEnter The Type Of Account Of Customer");

ta=in.readLine();

A1.Getdata(n,an,ta);

System.out.println("\n Enter The Choice");

System.out.println("1. To Deposite an Amount");

System.out.println("2. To Withdraw an Amount");

System.out.println("3. To Check BAlance");

m=Integer.parseInt(in.readLine());

switch(m) {

case 1:

{

System.out.println("\n\nEnter The Amount To Deposite");

amt=Float.parseFloat(in.readLine());

A1.Deposite(amt);

break;

}

case 2:

{

System.out.println("\n \n Enter The Amount To Withdrwn");

draw=Float.parseFloat(in.readLine());

A1.WithDraw(draw);

break;

}

case 3:

{

A1.Display();

break;

}

default:

{

System.out.print("\n Wrong Choice");

break;

}

}

}

catch(Exception e) {}

}

}

**OUTPUT**:

Enter the Name Of Customer

Raman

Enter the Account Number Of Customer

3452

Enter the Type Of Account Of Customer

Fixed

Enter The Choice

1. To Deposit an Amount

2. To Withdraw an Amount

3. To Check Balance

1

Enter The Amount To Deposit

1500

Amount Deposited 1500.0

Current Balance = 11500.0

**PRACTICAL NO. 14**

**AIM: - Program to print Sum of Series.**

**PROGRAM:**

class series

{

public static void main(String args[])

{

int n=10;

int i=0;

int sum=0;

int x=2;

while(i<n)

{

sum+=Math.pow(x,i);

i++;

}

System.out.println("Sum of Series 1+X+X^2+X^3+....= " +sum);

}

}

**OUTPUT**:

Sum of Series 1+X+X^2+X^3+....= 1023

**PRACTICAL NO. 15**

**AIM: - Program for Multithreading.**

**PROGRAM:**

class FiveTable extends Thread

{

public void run()

{

for(int i=1;i<=5;i++)

System.out.println(i+"Fives are " +(i\*5));

}

}

class SevenTable extends Thread

{

public void run()

{

for(int i=1;i<=5;i++)

System.out.println(i+"Sevens are " +(i\*7));

}

}

class ThirteenTable extends Thread

{

public void run()

{

for(int i=1;i<=5;i++)

System.out.println(i+"Thirteens are " +(i\*13));

}

}

public class MultiThreadingDemo

{

public static void main(String args[])

{

FiveTable five=new FiveTable();

SevenTable seven=new SevenTable();

ThirteenTable thirteen=new ThirteenTable();

five.start();

seven.start();

thirteen.start();

}

}

**OUTPUT**:

1 Fives are 5

1 Sevens are 7

1 Thirteens are 13

2 Fives are 10

2 Sevens are 14

2 Thirteens are 26

3 Fives are 15

3 Sevens are 21

3 Thirteens are 39

4 Fives are 20

4 Sevens are 28

4 Thirteens are 52

5 Fives are 25

5 Sevens are 35

5 Thirteens are 65

**PRACTICAL NO. 16**

**AIM: - Program for calculator.**

**PROGRAM:**

import java.awt.\*;

import java.awt.event.\*;

import javax.swing.\*;

import java.lang.\*;

public class calc extends JFrame

{

JButton b0,b1,b2,b3,b4,b5,b6,b7,b8,b9;

JButton badd,bsub,bmul,bdiv,bequal;

JLabel l1;

calc(String title)

{

super(title);

l1 = new JLabel("0");

l1.setHorizontalAlignment(JTextField.RIGHT);

Container con = getContentPane();

JPanel p1 = new JPanel();

GridLayout g1 = new GridLayout(5,3);

p1.setLayout(g1);

b0 = new JButton("0");

b1 = new JButton("1");

b2 = new JButton("2");

b3 = new JButton("3");

b4 = new JButton("4");

b5 = new JButton("5");

b6 = new JButton("6");

b7 = new JButton("7");

b8 = new JButton("8");

b9 = new JButton("9");

badd = new JButton("+");

bsub = new JButton("-");

bmul = new JButton("\*");

bdiv = new JButton("/");

bequal = new JButton("=");

p1.add(b7);

p1.add(b8);

p1.add(b9);

p1.add(b4);

p1.add(b5);

p1.add(b6);

p1.add(b1);

p1.add(b2);

p1.add(b3);

p1.add(b0);

p1.add(bequal);

p1.add(bdiv);

p1.add(badd);

p1.add(bsub);

p1.add(bmul);

con.setLayout(new BorderLayout());

con.add(l1, BorderLayout.NORTH);

con.add(p1, BorderLayout.CENTER);

buttonlistener blist = new buttonlistener(this);

b0.addActionListener(blist);

b1.addActionListener(blist);

b2.addActionListener(blist);

b3.addActionListener(blist);

b4.addActionListener(blist);

b5.addActionListener(blist);

b6.addActionListener(blist);

b7.addActionListener(blist);

b8.addActionListener(blist);

b9.addActionListener(blist);

badd.addActionListener(blist);

bsub.addActionListener(blist);

bmul.addActionListener(blist);

bdiv.addActionListener(blist);

bequal.addActionListener(blist);

}

public static void main(String args[])

{

calc c1 = new calc("calculator");

c1.setSize(200,250);

c1.setLocation(250,250);

c1.setVisible(true);

c1.setDefaultCloseOperation(EXIT\_ON\_CLOSE);

}

}

class buttonlistener implements ActionListener

{

calc c1;

String sa, sb, sc;

int a, b, c;

int op;

String bval;

public buttonlistener(calc c1)

{

this.c1=c1;

}

public void actionPerformed(ActionEvent e)

{

if (e.getSource() == c1.bequal)

{

switch(op)

{

case 1 :

a = b + a; break;

case 2 :

a = b - a; break;

case 3 :

a = b \* a; break;

case 4 :

a = b / a; break;

}

c1.l1.setText(Integer.toString(a));

}

else

if(e.getSource() == c1.badd)

{

sa = c1.l1.getText();

b = Integer.parseInt(sa);

c1.l1.setText("0");

a=0;

op=1;

}

else

if(e.getSource() == c1.bsub)

{

sa = c1.l1.getText();

b = Integer.parseInt(sa);

c1.l1.setText("0");

a=0;

op=2;

}

else

if(e.getSource() == c1.bmul)

{

sa = c1.l1.getText();

b = Integer.parseInt(sa);

c1.l1.setText("0");

a=0;

op=3;

}

else

if(e.getSource() == c1.bdiv)

{

sa = c1.l1.getText();

b = Integer.parseInt(sa);

c1.l1.setText("0");

a=0;

op=4;

}

else

{

bval = e.getActionCommand();

a = a\* 10 + Integer.parseInt(bval);

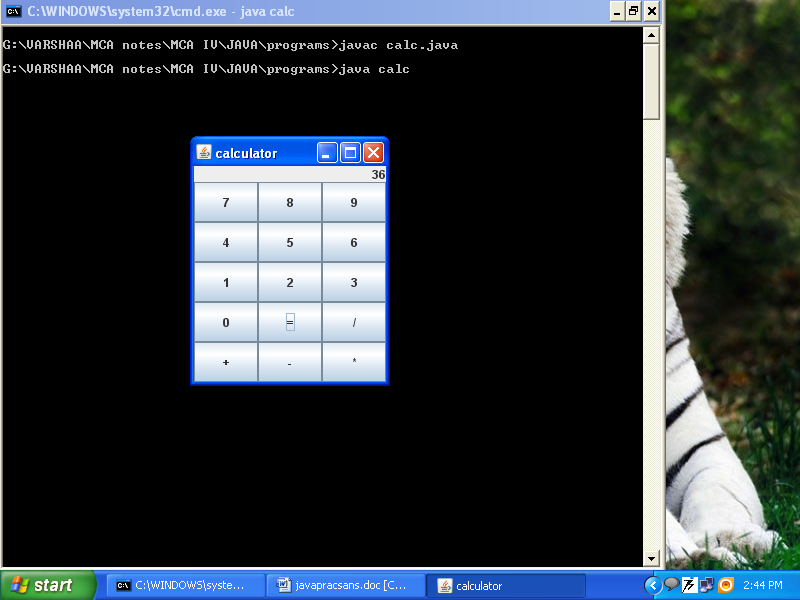
c1.l1.setText(Integer.toString(a));

}

}

}

**OUTPUT**:

****