**DO SELECT QUESTIONS**

**Q14**

import java.util.Scanner;

public class Multiplecatch {

public String checkException(double n1,double n2,char op)

{

try

{

if((n1==0)||(n2==0)||((op!='+')&&(op!='-')&&(op!='\*')&&(op!='/')))

{

if((n1==0)||(n2==0))

{

if(op=='\*')

{

throw new MultiplicationbyZero("Multiplication with zero results in zero");

}

else

{

if(op=='/')

{

throw new ArithmeticException("Division by zero results in infinity");

}

}

}

else

{

String mess=op+"invalid operator";

throw new Otherexception(mess);

}

}

}catch(MultiplicationbyZero me)

{

return "Multiplication with zero results in zero";

}

catch(ArithmeticException ae)

{

return "Division by zero results in infinity";

}

catch(Otherexception e)

{

String mess=op+"invalid operator";

return mess;

}

return "No exception found";

}

public double calculate(double n1,double n2,char op)

{

double ans=0.0;

char o=op;

switch(o)

{

case '+':

{

ans=n1+n2;

return ans;

}

case '-':

{

ans=n1-n2;

return ans;

}

case '\*':

{

ans=n1\*n2;

return ans;

}

case '/':

{

ans=n1/n2;

return ans;

}

}

return ans;

}

public static void main(String[] args)throws MultiplicationbyZero,ArithmeticException,Exception

{

Scanner sc= new Scanner(System.in);

double num1=sc.nextDouble();

double num2=sc.nextDouble();

char op=sc.next().charAt(0);

Multiplecatch mc=new Multiplecatch();

String msg=mc.checkException(num1,num2,op);

System.out.println(msg);

if(msg=="No exception found")

{

double result=mc.calculate(num1,num2,op);

System.out.println(result);

}

}

}

class MultiplicationbyZero extends Exception

{

private static final long serialVersionUID=1L;

public MultiplicationbyZero(String str)

{

super(str);

}

}

class Otherexception extends Exception

{

private static final long serialVersionUID=1L;

public Otherexception(String str)

{

super(str);

}

}