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**Roll No:29**

**Batch:RMCA B**

**Date:21/04/2022**

**OBJECT ORIENTED PROGRAMMING LAB**

**Experiment No.: 5**

**Aim**

Program to perform multiplication of two matrices

**Procedure**

import java.util.\*;

import java.lang.\*;

public class MATRIXMUX1

{

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

public static void main(String args[])

{

int a,b,c,d;

int [][] A =new int[5][5];

int [][] B =new int[5][5];

int [][] C =new int[5][5];

int Choice;

Scanner s=new Scanner(System.in);

System.out.println("Enter the number of rows for matrix 1");

a=s.nextInt();

System.out.println("Enter the number of columns for matrix 2");

b=s.nextInt();

System.out.println("Enter the number of rows for matrix 1");

c=s.nextInt();

System.out.println("Enter the number of columns for matrix 2");

d=s.nextInt();

while(true)

{

System.out.println("\n\*\*\*\*\*\*\*\*\*MENU\*\*\*\*\*\*\*\*\*");

System.out.println("1.Enter values into matrix \n");

System.out.println("2.Perform multiplication \n");

System.out.println("3.Display the resultant matrix \n");

System.out.println("4.Exit from the console \n");

System.out.println("Enter the users choice \n");

Choice=s.nextInt();

switch(Choice)

{

case 1:inputdata(a,b,c,d,A,B);

break;

case 2:multiply(a,b,c,d,A,B,C);

break;

case 3:display(a,b,c,d,A,B,C);

break;

case 4:java.lang.System.exit(0);

break;

default:System.out.println("invalid choice");

}

}

}

public static void inputdata(int a,int b,int c,int d,int [][] A,int [][] B)

{

System.out.println("enter values into the matrix1");

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

{

for(int j=0;j<b;j++)

{

A[i][j]=s.nextInt();

}

}

System.out.println("enter values into the matrix2");

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

{

for(int j=0;j<b;j++)

{

B[i][j]=s.nextInt();

}

}

}

public static void multiply(int a,int b,int c,int d,int [][] A,int [][] B,int [][] C)

{

if(a==d)

{

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

{

for(int j=0;j<b;j++)

{

C[i][j]=0;

for(int k=0;k<b;k++)

{

C[i][j]+=A[i][k]\*B[k][j];

}

}

}

System.out.println("Multiplication Performed");

}

else

{

System.out.println("Multiplication cannot be performed");

}

}

public static void display(int a,int b,int c,int d,int [][] A,int [][] B,int [][] C)

{

System.out.println("displaying the resultant matrix");

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

{

for(int j=0;j<b;j++)

{

System.out.print("\t"+C[i][j]);

}

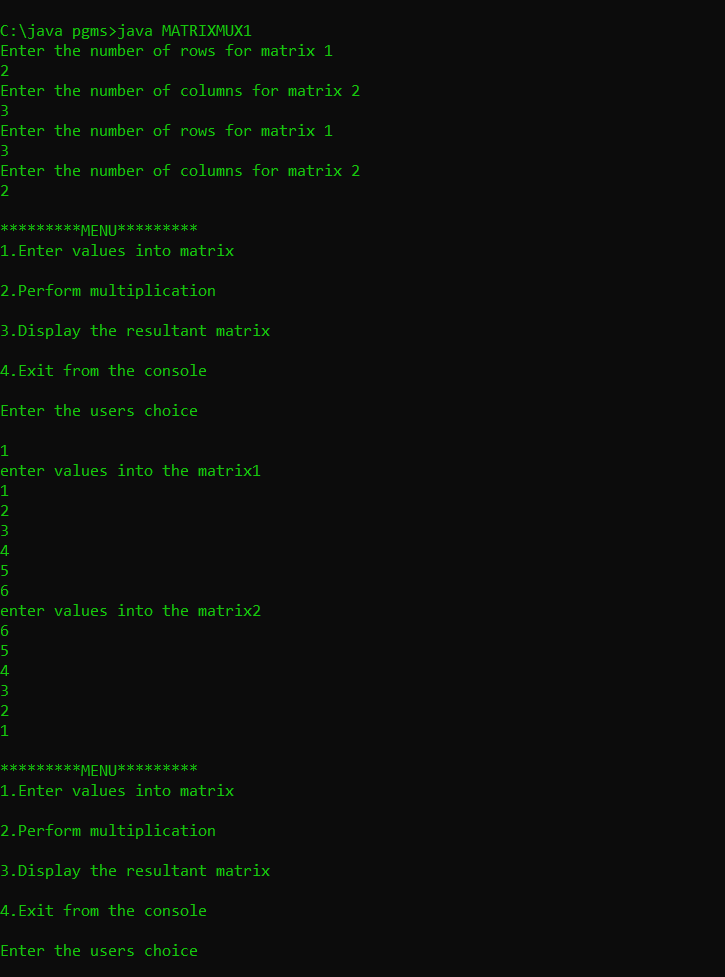
System.out.print("\n");

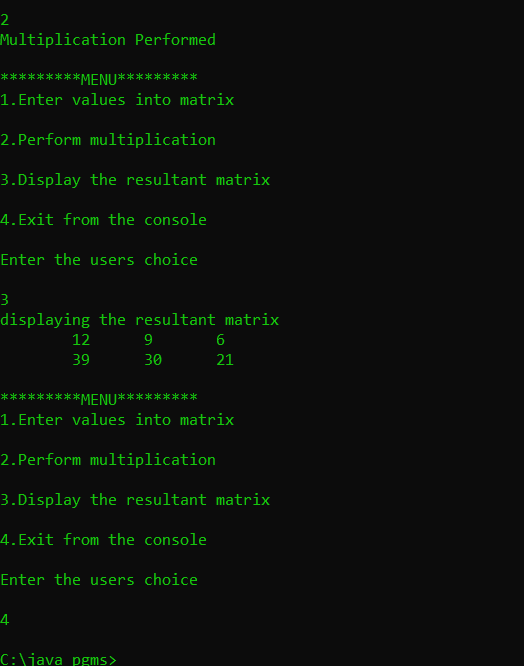
}

}

}

**Output Screenshot**

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