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SE/IT/A Batch B

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EXPERIMENT NO 03: WRITE A MENU DRIVEN PROGRAM TO PERFORM ADDITION,MULTIPLICATION, AND TRANSPOSE OF TWO MATRICES

import java.util.Scanner;

class arraytwo

{

int [][]a;

int [][]b;

int [][]c;

int [][]d;

int i,j,k;

void enter()

{

Scanner sc= new Scanner(System.in);

a=new int[2][2];

b=new int[2][2];

System.out.println("Enter array1");

for(i=0;i<2;i++)

{

for(j=0;j<2;j++)

{

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

}

}

System.out.println("Enter array2");

for(i=0;i<2;i++)

{

for(j=0;j<2;j++)

{

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

}

}

System.out.println("Print the array1:");

for(i=0;i<2;i++)

{

for(j=0;j<2;j++)

{

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

}

System.out.println(" ");

}

System.out.println("Print the array2:");

for(i=0;i<2;i++)

{

for(j=0;j<2;j++)

{

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

}

System.out.println(" ");

}

}

void add()

{

c=new int[2][2];

for(i=0;i<2;i++)

{

for(j=0;j<2;j++)

{

c[i][j]=a[i][j]+b[i][j];

}

}

System.out.println("Addition array is:");

for(i=0;i<2;i++)

{

for(j=0;j<2;j++)

{

System.out.print(c[i][j] );

}

System.out.println(" ");

}

}

void mul()

{

d=new int[2][2];

for(i=0;i<2;i++)

{

for(j=0;j<2;j++)

{

d[i][j]=0;

for(k=0;k<2;k++)

{

d[i][j]=d[i][j]+(a[i][k]\*b[k][j]);

}

}

}

System.out.println("MUltiplication matrix is:");

for(i=0;i<2;i++)

{

for(j=0;j<2;j++)

{

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

}

System.out.println(" ");

}

}

void trans()

{

int t;

for(i=0;i<2;i++)

{

for(j=0;j<2;j++)

{

if(i>j)

{

t=a[i][j];

a[i][j]=a[j][i];

a[j][i]=t;

}

}

}

System.out.println("Transpose matrix is:");

for(i=0;i<2;i++)

{

for(j=0;j<2;j++)

{

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

}

System.out.println(" ");

}

}

}

class mat

{

public static void main(String args[])

{

arraytwo a1=new arraytwo();

a1.enter();

a1.add();

a1.mul();

a1.trans();

}

}

output:

C:\Users\OOP-16>d:

D:\>cd abhishek

D:\abhishek>javac mat.java

D:\abhishek>java mat

Enter array1

1 3 4 5

Enter array2

3 5 6 7

Print the array1:

1 3

4 5

Print the array2:

3 5

6 7

Addition array is:

48

1012

MUltiplication matrix is:

21 26

42 55

Transpose matrix is:

1 4

3 5