

Experiment 6: Implement a program on 2D array & strings functions.

class mat

```
{
public static void main(String arg[])
{
int a[][] = {{1,2},{3,4}};
int b[][] = {{1,2},{3,4}};
int c[][] = new int[2][2];
int i,j,k;
System.out.println("\nGiven A Matrix is...");
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
System.out.print(a[i][j]+"\\t");
}
System.out.println("\\n");
}
System.out.println("\nGiven B Matrix is...");
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
System.out.print(b[i][j]+"\\t");
}
System.out.println("\\n");
}
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
c[i][j] = a[i][j] + b[i][j];
}
}
System.out.println("\nMatrix Addition is...");
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
System.out.print(c[i][j]+"\\t");
}
System.out.println("\\n");
}
}
```

```

for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
c[i][j] = a[i][j] - b[i][j];
}
}
System.out.println("\nMatrix Subtraction is...");
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
System.out.print(c[i][j]+"\\t");
}
System.out.println("\\n");
}
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
for(k=0;k<2;k++)
{
c[i][j] = c[i][j] + a[i][k] * b[k][j];
}
}
}
System.out.println("\\nMatrix Multiplication is...");
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
System.out.print(c[i][j]+"\\t");
}
System.out.println("\\n");
}
}
}

```

Output:

```
C:\Windows\System32\cmd.e x + v
1      2
3      4

Given B Matrix is...
1      2
3      4

Matrix Addition is...
2      4
6      8

Matrix Subtraction is...
0      0
0      0

Matrix Multiplication is...
7      10
15     22
```

//string comparison:

```
class Teststringcomparison1
{
    public static void main(String args[]){
        String s1="preeti";
        String s2="preeti";
        String s3=new String("preeti");
        String s4="suraj";
        System.out.println(s1.equals(s2));//true
        System.out.println(s1.equals(s3));//true
        System.out.println(s1.equals(s4));//false
    }
}
```

Output:

```
C:\Windows\System32\cmd.e x + v
Microsoft Windows [Version 10.0.22621.2283]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Priti\OneDrive\java exmple>javac Teststringcomparison1.java

C:\Users\Priti\OneDrive\java exmple>java Teststringcomparison1.java
true
true
false

C:\Users\Priti\OneDrive\java exmple>
```

```
//string concatenation
class Stringcats
{
    public static void main(String args[]){
        String s1="sachin";
        String s2="tendulkar";
        String s3=s1.concat(s2);
        System.out.println(s3);
    }
}
```

Output:

```
Microsoft Windows [Version 10.0.22621.2283]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Priti\OneDrive\java exmple>javac Stringcats.java

C:\Users\Priti\OneDrive\java exmple>java Stringcats.java
sachintendulkar
```

```
//String size
class Stringsize {

    public static void main(String[] args)
    {

        String str = "Krishna";
        System.out.println("The size of "
        + "the String is "
        + str.length());
    }
}
```

```
Microsoft Windows [Version 10.0.22621.2283]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Priti\OneDrive\java exmple>javac Stringsize.java

C:\Users\Priti\OneDrive\java exmple>java Stringsize.java
The size of the String is 7
```