**Multidimensional Array In JAVA:**

Array is continuous memory locations used to store homogeneous data means a data of similar type and Multi-Dimensional Array is used to store the values in the rows as well as in columns.

**multi-dimensional array declaration syntax:**

int[][] twoDimensionalArray= new int[2][3];

**Multi-dimensional Array initialization:**

int[][] twoDArray=new int[2][2];

    /\*value assigned are 1,2,4,5 at [0][0],[0][1],[1][0],[1][1] index values respectively\*/

        twoDArray[0][0]=1;

        twoDArray[0][1]=2;

        twoDArray[1][0]=4;

        twoDArray[1][1]=5;

**Example**

**public** **class** MultiDimensionalArray{

**public** **static** **void** main(String[] args) {

**int**[][] twoDimensionalArray= **new** **int**[2][3];

**int**[][] twoDArray=**new** **int**[2][];

twoDArray[0]=**new** **int**[2];

twoDArray[1]=**new** **int**[2];

twoDArray[0][0]=1;

twoDArray[0][1]=2;

twoDArray[1][0]=4;

twoDArray[1][1]=5;

String[][] str={{"Hello","Mr"},{"How","You"}};

String[][] str1= **new** String[2][2];

str1[0][0]="Hello";

str1[0][1]="Mr";

str1[1][0]="How";

str1[1][1]="You";

System.***out***.println("The Result for twodimenionalarray is:");

twoDimensionalArray[0][0]=0;

**for**(**int** i=0;i<2;i++){

**for**(**int** j=0; j<3; j++){

twoDimensionalArray[i][j]=i+j;

System.***out***.print(+twoDimensionalArray[i][j]);

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

}

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

}

System.***out***.println("The Result for twoDArray is:");

**for**(**int** i=0;i<2;i++){

**for**(**int** j=0; j<2; j++){

System.***out***.print(twoDArray[i][j]);

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

}

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

}

System.***out***.println("The Result for String Array is:");

**for**(**int** i=0;i<2;i++){

**for**(**int** j=0; j<2; j++){

System.***out***.print(str[i][j]);

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

}

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

}

System.***out***.println("The Result for String Array by initializing in different way is:");

**for**(**int** i=0;i<2;i++){

**for**(**int** j=0; j<2; j++){

System.***out***.print(str[i][j]);

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

}

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

}

}

}

**Output**

The Result for twodimenionalarray is:

0 1 2

1 2 3

The Result for twoDArray is:

1 2

4 5

The Result for String Array is:

Hello Mr

How You

The Result for String Array by initializing in different way is:

Hello Mr

How You