**Two-dimensional array input in Java**

A two-dimensional array is an array that contains elements in the form of rows and columns. It means we need both row and column to populate a two-dimensional array. **Matrix** is the best example of a 2D array. We can declare a two-dimensional array by using the following statement.

Syntax: datatype arrayname[ ][ ] = **new** datatype[m][n];

Where,

**datatype:** is the type of the elements that we want to enter in the array, like int, float, etc.

**arrayname:** is an identifier.

**new:** is a keyword that creates an instance in the memory.

**m:** is the number of rows.

**n:** is the number of columns.

**Sample Java program that takes a two-dimensional array as input.**

**import** java.util.Scanner;

**public** **class** Matrix

{

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

{

**int** m, n, i, j;

Scanner sc=**new** Scanner(System.in);

System.out.print("Enter the number of rows: ");   //taking row as input   m = sc.nextInt( );

System.out.print("Enter the number of columns: ");  //taking column as input

n = sc.nextInt( );

**int** array[ ][ ] = **new** **int**[m][n];   // Declaring 2D array/ Matrix

System.out.println("Enter the elements of the array: ");

**for** (i = 0; i < m; i++)   //loop for row

**{**

**for** (j = 0; j < n; j++)   //inner for loop for column

**{**

array[i][j] = sc.nextInt();

}

}

System.out.println("Elements of the array are: ");

**for** (i = 0; i < m; i++)

{

**for** (j = 0; j < n; j++)

**{**

System.out.print(array[i][j] + " ");   //prints the array elements

System.out.println();

}

}

} //Closing of main

**Output:**

