









# Multi-Dimensional Array

array of arrays also known as a multidimensional array

datatype[ ][ ] identifier;

String[][] names.

can have multiple rows and multiple columns

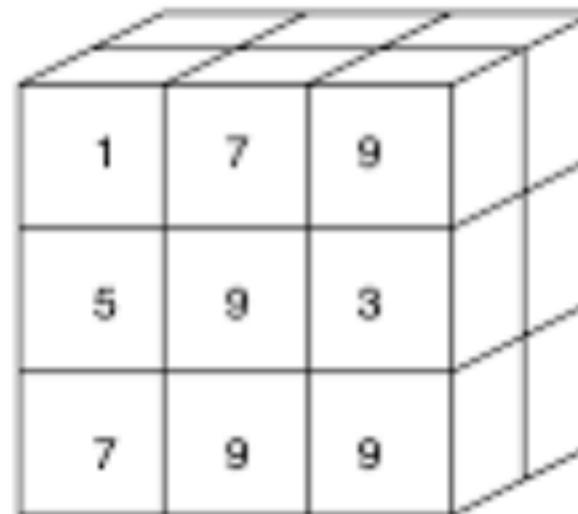
1D Array

3	2
---	---

2D Array

1	0	1
3	4	1

3D Array



*multidimensional array is an array whose components are themselves arrays.*

```
package arraypack;
```

```
public class  
MultiDimArrayDemo {
```

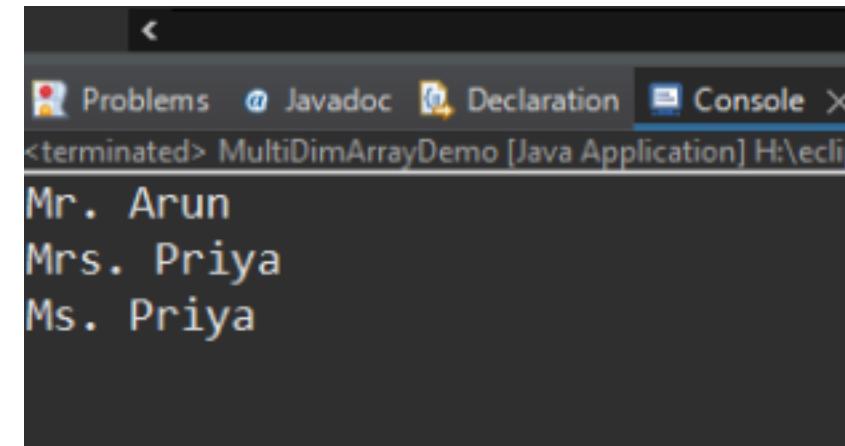
```
public static void  
main(String[] args) {
```

```
String[][] names = {  
    {"Mr. ", "Mrs. ", "Ms.  
"}, // first row {"Arun",
```

```
"Priya"} // second row  
};
```

Mr	Mrs
----	-----

Arun Priya  
Ms



```
Problems Javadoc Declaration Console <terminated> MultiDimArrayDemo [Java Application] H:\eclip  
Mr. Arun  
Mrs. Priya  
Ms. Priya
```

```
System.out.println(names[0][0] +  
names[1][0]); System.out.println(names[0][1]  
+ names[1][1]);  
System.out.println(names[0][2] +  
names[1][1]);
```

```
}
```

```
}
```

Create an Array

new

```
{98,76,65,54,43}  
};
```


```
int[ ][ ] arr = {  
{11,23,34,45,56},  
{67,78,89,10,22},  
Accessing array element
```

arr [1] [2]

valid syntax for String array in main()

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

Q: can I use The Java for-each (Enhanced for) Loop for 2-dimensional array ?

```
public class TwoDArrayExample
{
    public static void main()
    {
        int twoDArray[][]
        {
            { 1, 2, 3, 4, 5, 6, 7, 8, 9 }
        }
    }
}
```

```
for int rowValue twoDArray  
for int colValue rowValue  
    colValue "\t "  
  
public class TwoDArrayExample  
    public static void main  
        String[][] names = { "B", "A", "D", "R" }, { "Bini", "Arun", "Devu", "Rukku" }  
  
        for String rows names
```

for String cols rows

cols "\t "

2.run by > java CommandLineExample luminar  
technolab

Output: Your first argument is: luminar  
Luminar  
technolab

1.compile by > javac CommandLineExample.java

LUMINAR-ECLIPSE-2023-12 - MOD\_01\_Fundamentals/src/com/CommandLineExample.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer X CommandLineExample.java X

```
1 package com;
2
3 public class CommandLineExample {
4     public static void main(String[] args) {
5         System.out.println("Your first argument is: "+args[0]);
6         for(String str:args)
7             System.out.println(str+"\n");
8     }
9 }
10 |
```

Problems Javadoc Declaration Console X

<terminated> CommandLineExample [Java Application] H:\eclipse\plugins\org.eclipse.jdt.openjdk.hotspot.jre.full.win32.x86\_64\_17.0.9.v20231028-08

1 Java Application Alt+Shift+X, J  
Run Configurations...

Undo Typing  
Revert File  
Save  
Open Declaration  
Open Type Hierarchy  
Open Call Hierarchy  
Show in Breadcrumb  
Quick Outline  
Quick Type Hierarchy  
Open With  
Show In  
Cut  
Copy  
Copy Qualified Name  
Paste  
Raw Paste  
Quick Fix  
Source  
Refactor  
Local History  
References  
Declarations  
Add to Snippets...  
Coverage As  
Run As  
Debug As  
Profile As

