

# Class Assign2

java.lang.Object  
Assign2

```
public class Assign2
extends Object
```

## Constructor Summary

Constructors	
Constructor	Description
<code>Assign2()</code>	No-args Assign 2 Constructor: Declares and initializes a 5 x 5 matrix with random BigInteger values [5000000000,10000000000).
<code>Assign2(BigInteger [][] m)</code>	Assign2 Constructor

## Method Summary

All Methods	Instance Methods	Concrete Methods
Modifier and Type	Method	Description
boolean	<code>check()</code>	Checks if the 2d array sorted by row first then column is the same as the 2d array sorted by column first then row.
<code>BigInteger []</code>	<code>column(int x)</code>	Creates and returns an array of the column of the 2d array specified by parameter int x
<code>BigInteger [][]</code>	<code>copy()</code>	Creates and returns a copy of the 2d array.
boolean	<code>equals(Object o)</code>	Checks if parameter Object is equal to Assign2.
<code>BigInteger [][]</code>	<code>getData()</code>	Returns the 2d BigInteger array attribute of Assign2 object.
<code>BigInteger []</code>	<code>row(int x)</code>	Creates and returns an array of the row of the 2d array specified by parameter int x.
void	<code>sortCol()</code>	First sorts the 2d BigInteger array by column, then by row.

<code>void</code>	<code>sortRow()</code>	First sorts the 2d BigInteger array by row, then by column.
<code>String</code>	<code>toString()</code>	Creates a String representation of the 2d BigInteger array attribute of Assign2.

### Methods inherited from class `java.lang.Object`

`clone` , `getClass` , `hashCode` , `notify` , `notifyAll` , `wait` , `wait` , `wait`

## Constructor Details

### Assign2

```
public Assign2()
```

No-args Assign 2 Constructor: Declares and initializes a 5 x 5 matrix with random BigInteger values [500000000,1000000000).

### Assign2

```
public Assign2(BigInteger [][] m)
```

Assign2 Constructor

#### Parameters:

`m` - A parameter 2d BigInteger array.

## Method Details

### toString

```
public String toString()
```

Creates a String representation of the 2d BigInteger array attribute of Assign2.

#### Overrides:

`toString` in class `Object`

#### Returns:

The return value is the String representation of 2d BigInteger array attribute of Assign2.

## equals

```
public boolean equals(Object o)
```

Checks if parameter Object is equal to Assign2.

**Overrides:**

`equals` in class `Object`

**Parameters:**

o - Any object.

**Returns:**

The return value is true if the objects are equal, otherwise it is false.

## copy

```
public BigInteger [][] copy()
```

Creates and returns a copy of the 2d array.

**Returns:**

The return value is a copy of the 2d array.

## column

```
public BigInteger [] column(int x)
```

Creates and returns an array of the column of the 2d array specified by parameter int x

**Parameters:**

x - int value of the index of the desired column.

**Returns:**

The return value is an array for column x.

**Throws:**

x - must be a valid column number.

## row

```
public BigInteger [] row(int x)
```

Creates and returns an array of the row of the 2d array specified by parameter int x.

**Parameters:**

x - int value of the index of the desired row.

**Returns:**

The return value is an array for row x.

**Throws:**

x - must be a valid row number.

## getData

```
public BigInteger [][] getData()
```

Returns the 2d BigInteger array attribute of Assign2 object.

**Returns:**

The return value gives the 2d BigInteger array.

## sortCol

```
public void sortCol()
```

First sorts the 2d BigInteger array by column, then by row.

## sortRow

```
public void sortRow()
```

First sorts the 2d BigInteger array by row, then by column.

## check

```
public boolean check()
```

Checks if the 2d array sorted by row first then column is the same as the 2d array sorted by column first then row.

**Returns:**

The return value is true if the sortRow() and sortCol() methods give the same result, otherwise it is false.