



# Object Oriented Programming with Java (OOPJ)

Session 5: Arrays

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or

Ex:

```
int[] arr = new int[5];  
int[] arr1 = new int[3];
```

\_044\_Mrunali Jangam\_JH raised hand

View

x

arr[]

5

7

9

15

23

0

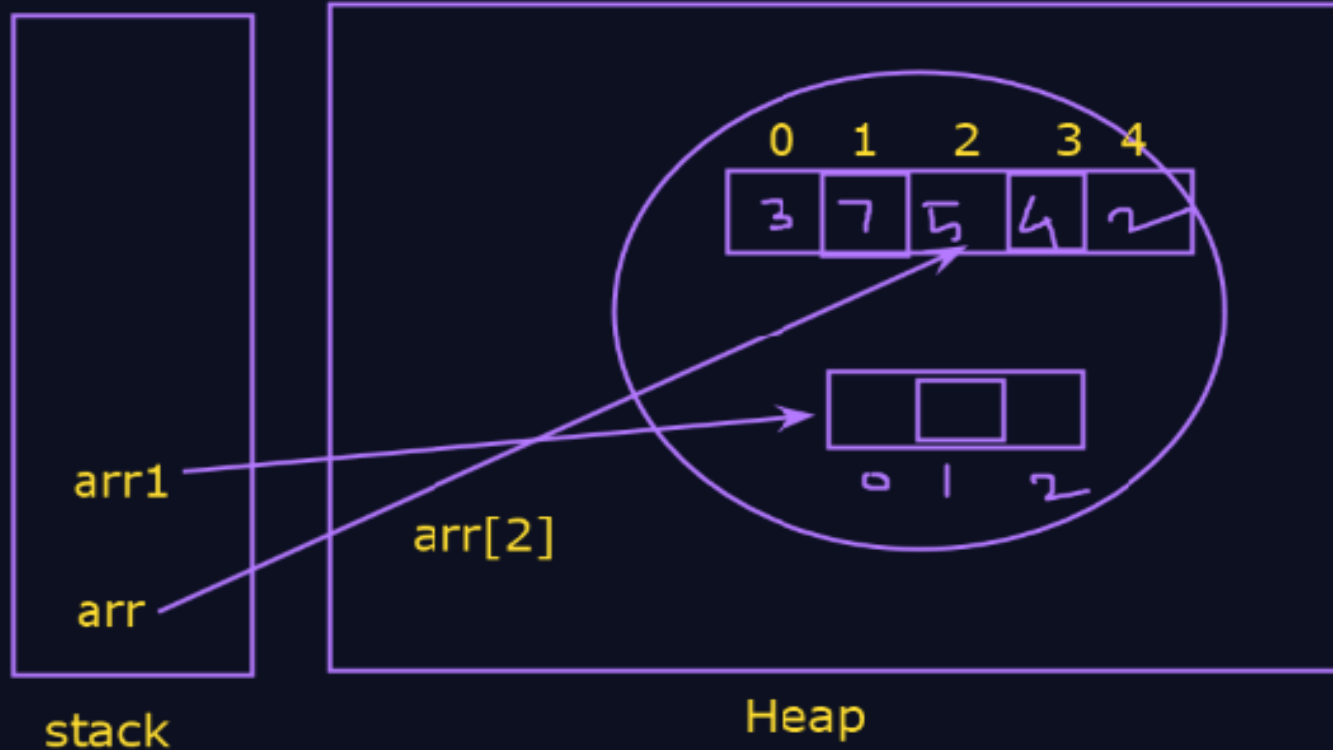
1

2

3

4

5



```
byte[] arr = new byte[5];  
short[] arr = new short[5];
```

```
class ArrayDemo2{  
    public static void main(String args[])  
    {  
        Scanner sc = new Scanner(System.in);  
        //length : Array  
        //length() : String  
  
        int arr[] = new int[5];  
        //Input in the array  
        for(int i=0;i<arr.length;i++)  
        {  
            System.out.println("Enter element:");  
            arr[i] = sc.nextInt();  
        }  
  
        for(int i=0;i<arr.length;i++)  
        {  
            System.out.println(arr[i]);  
        }  
    }  
}
```

C:\WINDOWS\system32

2

Enter element:

3

Enter element:

4

Enter element:

5

1

2

3

4

5

C:\Test>

```
class ArrayDemo1{  
  
    public static void main(String args[]){  
        Scanner sc = new Scanner(System.in);  
  
        int arr[] = new int[5];  
        //Input in the array  
        for(int i=0;i<3;i++){  
            System.out.println("Enter element:");  
            arr[i] = sc.nextInt();  
        }  
  
        for(int i=0;i<3;i++){  
            System.out.println(arr[i]);  
        }  
    }  
}
```

```
C:\WINDOWS\system32 x +  
C:\Test>javac ArrayDemo  
  
C:\Test>java ArrayDemo1  
Enter element:  
4  
Enter element:  
7  
Enter element:  
9  
4  
7  
9  
  
C:\Test>
```

```

byte[] arr = new byte[5]; // 0
short[] arr = new short[5]; // 0
float[] arr = new float[5]; // 0.0
char[] arr = new char[4]; // '/' u0000 '=null

```

For-each:

-Printing elements:

```

for(int x : arr){
    System.out.println(x);
}

```

2-D Array: Multidimensional array

1. Create an 2D array:

```

int[][] a;
int [][]a;
int a[][];

```

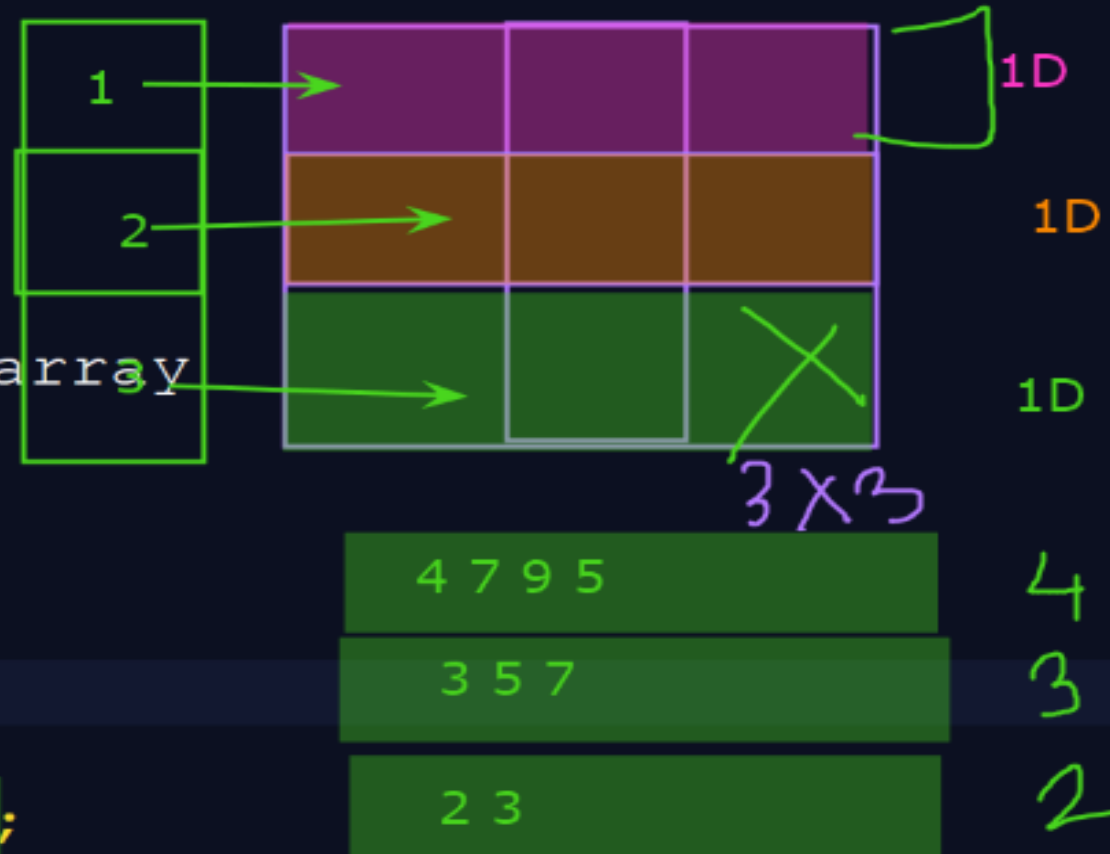
2. Declare 2D array:

```

int[][] a = new int[size][size];

```

Jagged array



```
public static void main(String args[]) {  
    int a[] = {1,2,3};  
    int b[] = {11,12,13};  
    int c[] = {21,22,23};  
  
    int arr[][] = new int[3][];  
    arr[0]=a;  
    arr[1]=b;  
    arr[2]=c;  
  
    for(int ar[] : arr)  
    {  
        for(int x : ar)  
        {  
            System.out.print(" "+x);  
        }  
        System.out.println();  
    }  
}
```

```
C:\WINDOWS\system32 x + v  
  
C:\Test>java ArrayDemo5  
1 2 3  
11 12 13  
21 22 23  
  
C:\Test>javac ArrayDemo6.java  
  
C:\Test>java ArrayDemo6  
1 2 3  
11 12 13  
21 22 23  
  
C:\Test>
```

```
import java.util.Scanner;
```

```
class ArrayDemo6{
```

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

```
    int a[] = {1,2,3};
```

```
    int b[] = {11,12,13};
```

```
    int c[] = {21,22,23};
```

```
    int arr[][] = new int[3][];
```

```
    arr[0]=a;
```

```
    arr[1]=b;
```

```
    arr[2]=c;
```

```
    for(int ar[] : arr)
```

```
    {
```

```
        for(int x : ar)
```

```
        {
```

```
            System.out.print(" "+x);
```

```
        }
```

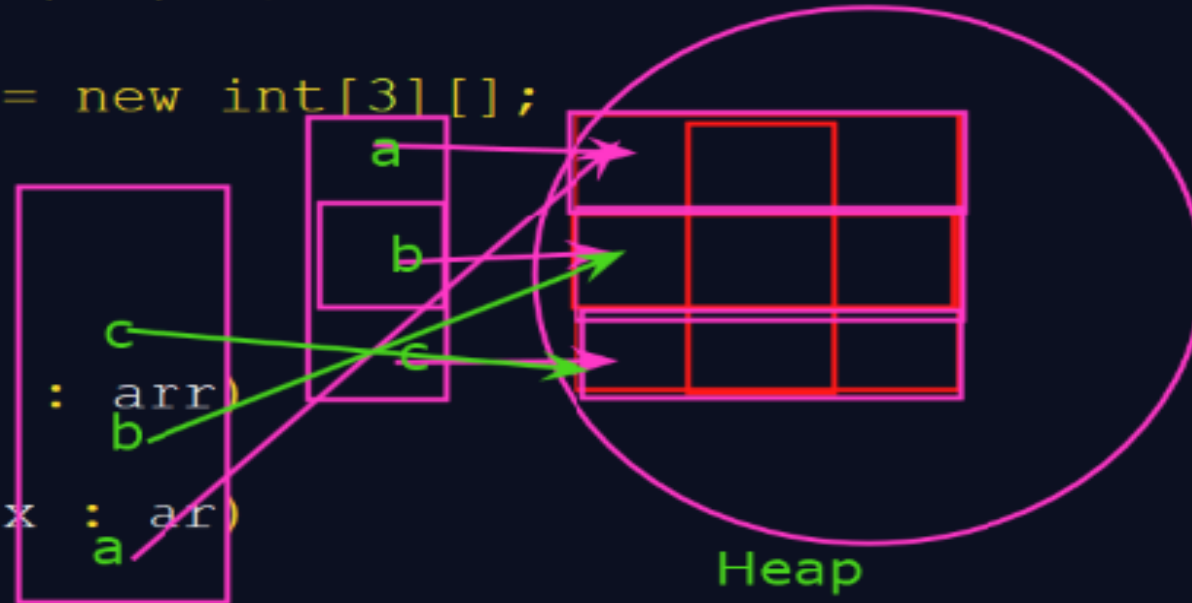
```
        System.out.println();
```

```
    }
```

```
}
```

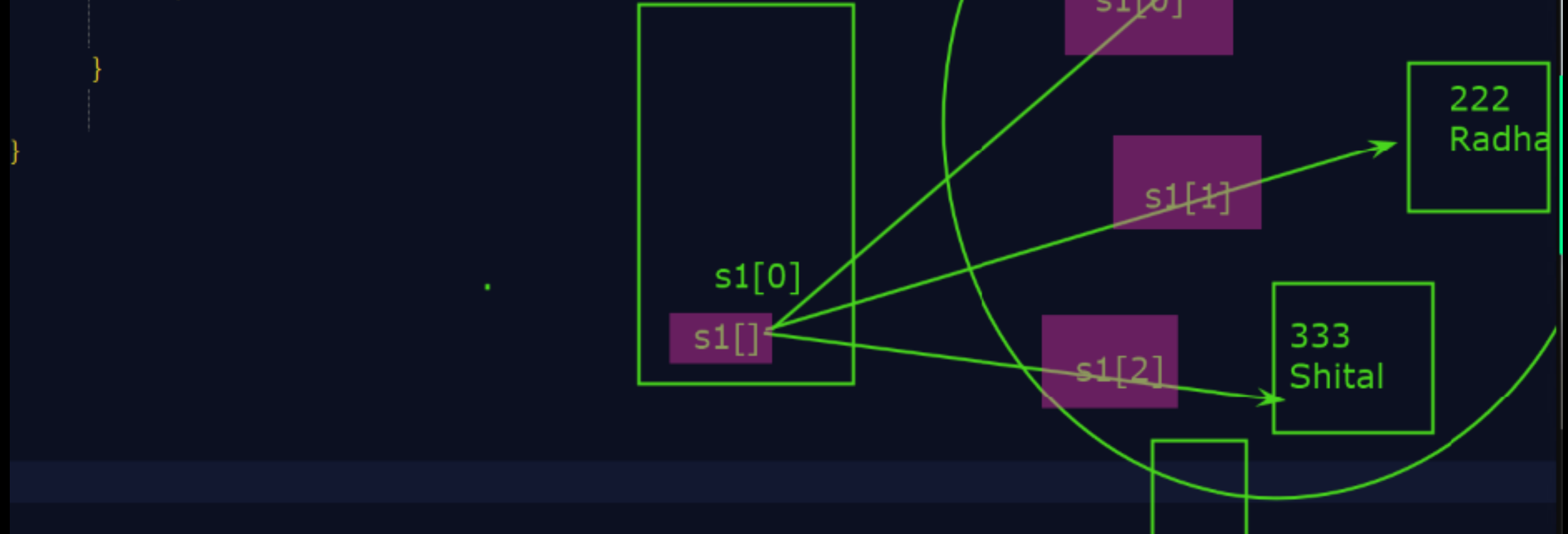
2	3	4	5
1			
3	4		

4  
1  
2



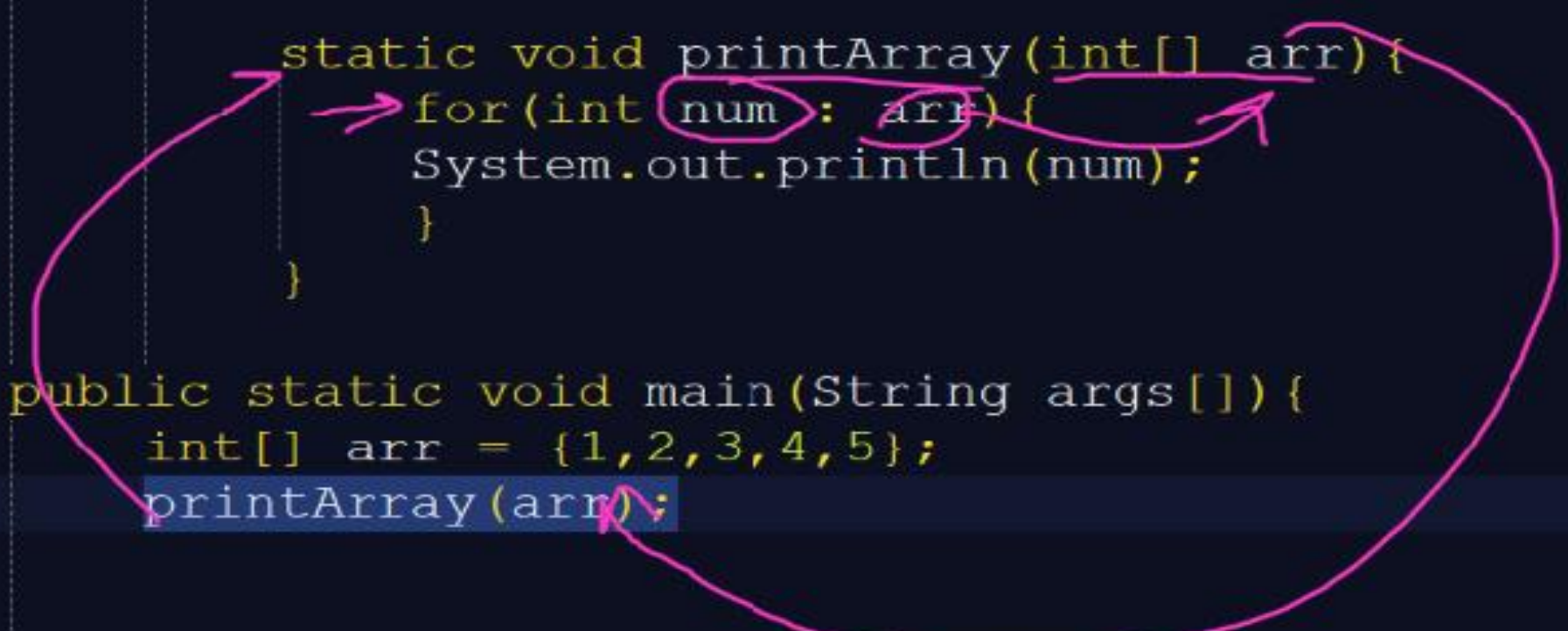
```
Student[] s1 = new Student[3]; //Array of objects  
s1[0] = new Student(111,"Shankar");  
s1[1] = new Student(222,"Radha");  
s1[2] = new Student(333,"Shital");
```

```
for(Student s : s1){  
    System.out.println(s.id+" "+s.name);  
}
```





```
class ArrayDemo10{  
    static void printArray(int[] arr){  
        for(int num: arr){  
            System.out.println(num);  
        }  
    }  
  
    public static void main(String args[]){  
        int[] arr = {1,2,3,4,5};  
        printArray(arr);  
    }  
}
```



```
class ArrayDemo10{
```

```
    static void printArray(int[] arr){  
        //Printing of array element  
        for(int num : arr){  
            System.out.println(num);  
        }  
    }
```

```
    public static void main(String args[]){  
        //Declared the array  
        int[] arr = {1,2,3,4,5};
```

```
        printArray(arr); //Called function: passing array reference
```

```
    }
```

```
}
```

```
class Employee{
```

```
int i;  
String name;
```

```
Employee(){  
    this.i = 100;  
    this.name="unknown";  
}
```

```
Employee(int i, String name){  
    this.i = i;  
    this.name=name;  
}
```

```
void data(String name, int i)  
{  
    this.i = i;  
    this.name=name  
}
```

Employee e1 = new Employee();

i  
name

Employee e1 = new Employee(555, "Abc")

e1.data("dfdrf", 222);