Arrays

One Dimensional Array

Index: 0 1 2 3

Problem: Display weights

Without Array:

```
int weight1 = 6;
int weight2 = 3;
int weight3 = 2;
int weight4 = 5;

System.out.println("Weight of #1 = " + weight1); // 6
System.out.println("Weight of #2 = " + weight2); // 3
System.out.println("Weight of #3 = " + weight3); // 2
System.out.println("Weight of #4 = " + weight4); // 5
```

With Array:

```
int weight[] = new int[4];
weight[0] = 6;
weight[1] = 3;
weight[2] = 2;
weight[3] = 5;

System.out.println("Weight of #1 = " + weight[0]); // 6
System.out.println("Weight of #2 = " + weight[1]); // 3
System.out.println("Weight of #3 = " + weight[2]); // 2
System.out.println("Weight of #4 = " + weight[3]); // 5
```

Problem: Display weights

Without Array:

```
int weight1 = 6;
int weight2 = 3;
int weight3 = 2;
int weight4 = 5;

System.out.println("Weight of #1 = " + weight1); // 6
System.out.println("Weight of #2 = " + weight2); // 3
System.out.println("Weight of #3 = " + weight3); // 2
System.out.println("Weight of #4 = " + weight4); // 5
```

With Array: Array Initializer

```
int weight[] = { 6, 3, 2, 5 };

System.out.println("Weight of #1 = " + weight[0]); // 6
System.out.println("Weight of #2 = " + weight[1]); // 3
System.out.println("Weight of #3 = " + weight[2]); // 2
System.out.println("Weight of #4 = " + weight[3]); // 5
```

Problem: Display weights

Without Array:

```
int weight1 = 6;
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System.out.println("Weight of #1 = " + weight1); // 6
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System.out.println("Weight of #3 = " + weight3); // 2
System.out.println("Weight of #4 = " + weight4); // 5
```

With Array: Array Loop

```
int weight[] = { 6, 3, 2, 5 };

for(int i=0; i<weight.length; i++) {
   System.out.println( weight[i] );
}
```

Problem: Display total weights

Without Array:

```
int weight1 = 6;
int weight2 = 3;
int weight3 = 2;
int weight4 = 5;

int total = weight1 + weight2 + weight3 + weight4;
System.out.println("Total = " + total); // 16
```

With Array: Array Loop

```
int weight[] = { 6, 3, 2, 5 };
int total = 0;

for(int i=0; i<weight.length; i++) {
   total = total + weight[i];
}

System.out.println( "Total = " + total ); // 16
```

Character Array

```
char name[] = {'Z', 'a', 'k', 'a', 'r', 'i', 'a'};

System.out.println(name); // Zakaria
System.out.println("I am " + new String(name));
System.out.println(name.length); // 7
System.out.println(name[2]); // k
```

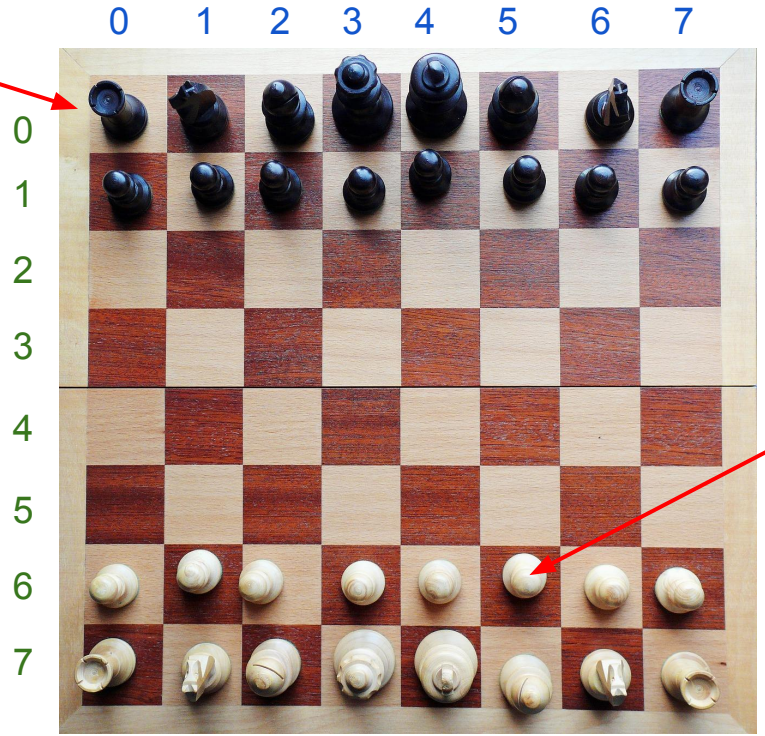
String

```
String name = "Zakaria";

System.out.println(name); // Zakaria
System.out.println("I am " + name);
System.out.println(name.length()); // 7
System.out.println(name.charAt(2)); // k
```

Two Dimensional Array

chess[0][0]



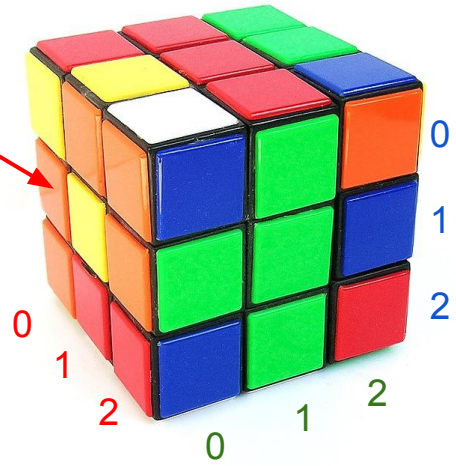
Index: [row][column]

int chess[][] = new int[8][8]

chess[6][5]

Three Dimensional Array

[0][1][0]



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