Java - Introduction to Programming Lecture 10

Arrays In Java

Arrays in Java are like a list of elements of the same type i.e. a list of integers, a list of booleans etc.

a. Creating an Array (method 1) - with new keyword

```
int[] marks = new int[3];
marks[0] = 97;
marks[1] = 98;
marks[2] = 95;
```

b. Creating an Array (method 2)
int[] marks = {98, 97, 95};

c. Taking an array as an input and printing its elements.

```
import java.util.*;

public class Arrays {
   public static void main(String args[]) {
        Scanner sc = new Scanner(System.in);
        int size = sc.nextInt();
        int numbers[] = new int[size];

        for(int i=0; i<size; i++) {
            numbers[i] = sc.nextInt();
        }

        //print the numbers in array
        for(int i=0; i<arr.length; i++) {
            System.out.print(numbers[i]+" ");
        }
    }
}</pre>
```

Homework Problems

1. Take an array of names as input from the user and print them on the screen.

```
import java.util.*;
public class Arrays {
```

2. Find the maximum & minimum number in an array of integers.

[HINT : Read about Integer.MIN_VALUE & Integer.MAX_VALUE in Java]

```
import java.util.*;
public class Arrays {
```

```
System.out.println("Largest number is : " + max);
System.out.println("Smallest number is : " + min);
}
}
```

- 3. Take an array of numbers as input and check if it is an array sorted in ascending order.
 - Eg: {1, 2, 4, 7} is sorted in ascending order.
 - {3, 4, 6, 2} is not sorted in ascending order.

```
public class Arrays {
  public static void main(String args[]) {
    Scanner sc = new Scanner(System.in);
    int size = sc.nextInt();
    int numbers[] = new int[size];

    //input
    for(int i=0; i<size; i++) {
        numbers[i] = sc.nextInt();
    }

    boolean isAscending = true;</pre>
```

```
for(int i=0; i<numbers.length-1; i++) { // NOTICE numbers.length - 1 as
termination condition
          System.out.println("The array is not sorted in ascending order");
```