Java - Introduction to Programming Lecture 12

Strings

Declaration

```
String name = "Tony";
```

Taking Input

```
Scanner sc = new Scanner(System.in);
String name = sc.next();
```

Concatenation (Joining 2 strings)

```
String firstName = "Tony";
    String secondName = "Stark";

String fullName = firstName + " " + secondName;
    System.out.println(fullName);
```

Print length of a String

```
String firstName = "Tony";
    String secondName = "Stark";

String fullName = firstName + " " + secondName;
    System.out.println(fullName.length());
```

Access characters of a string

```
String firstName = "Tony";
    String secondName = "Stark";

String fullName = firstName + " " + secondName;

for(int i=0; i<fullName.length(); i++) {
        System.out.println(fullName.charAt(i));
}</pre>
```

Compare 2 strings

```
import java.util.*;
public class Strings {
  public static void main(String args[]) {
      String name1 = "Tony";
      String name2 = "Tony";
       if(name1.equals(name2)) {
           System.out.println("They are the same string");
       } else {
           System.out.println("They are different strings");
       //DO NOT USE == to check for string equality
       //Gives correct answer here
       if(name1 == name2) {
           System.out.println("They are the same string");
           System.out.println("They are different strings");
       //Gives incorrect answer here
       if(new String("Tony") == new String("Tony")) {
           System.out.println("They are the same string");
           System.out.println("They are different strings");
```

Substring

The substring of a string is a subpart of it.

```
public class Strings {
   public static void main(String args[]) {
     String name = "TonyStark";

     System.out.println(name.substring(0, 4));
```

```
}
}
```

ParseInt Method of Integer class

```
public class Strings {
   public static void main(String args[]) {
      String str = "123";
      int number = Integer.parseInt(str);
      System.out.println(number);
}
```

ToString Method of String class

```
public class Strings {
   public static void main(String args[]) {
      int number = 123;
      String str = Integer.toString(number);
      System.out.println(str.length());
}
```

ALWAYS REMEMBER: Java Strings are Immutable.

Homework Problems

1. Take an array of Strings input from the user & find the cumulative (combined) length of all those strings.

```
import java.util.*;
public class Strings {
  public static void main(String args[]) {
    int size = sc.nextInt();
     String array[] = new String[size];
      array[i] = sc.next();
      totLength += array[i].length();
```

2. Input a string from the user. Create a new string called 'result' in which you will replace the letter 'e' in the original string with letter 'i'.

```
Example:

original = "eabcdef"; result = "iabcdif"

Original = "xyz"; result = "xyz"
```

```
import java.util.*;
```

3. Input an email from the user. You have to create a username from the email by deleting the part that comes after '@'. Display that username to the user.

```
Example:
```

```
email = "apnaCollegeJava@gmail.com"; username = "apnaCollegeJava"
email = "helloWorld123@gmail.com"; username = "helloWorld123"
```

```
import java.util.*;
public class Strings {
  public static void main(String args[]) {
     for(int i=0; i<email.length(); i++) {</pre>
    System.out.println(userName);
```