

Java - Introduction to Programming

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));  
}
```

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");
        } else {
            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");
        } else {
            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[]) {

        Scanner sc = new Scanner (System.in);

        int size = sc.nextInt();

        String array[] = new String[size];

        int totLength = 0;

        for(int i=0; i<size; i++) {

            array[i] = sc.next();

            totLength += array[i].length();

        }

        System.out.println(totLength);

    }

}

```

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.*;

public class Strings {

    public static void main(String args[]) {

```

```

Scanner sc = new Scanner (System.in);

String str = sc.next();

String result = "";

for(int i=0; i<str.length(); i++) {

    if(str.charAt(i) == 'e') {

        result += 'i';

    } else {

        result += str.charAt(i);

    }

}

System.out.println(result);

}
}

```

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[]) {

        Scanner sc = new Scanner (System.in);
    }
}

```

```
String email = sc.next();

String userName = "";

for(int i=0; i<email.length(); i++) {

    if(email.charAt(i) == '@') {

        break;

    } else {

        userName += email.charAt(i);

    }

}

System.out.println(userName);

}
```