The Third Program: EchoArgs

Start a new project called “EchoArgs” and enter the following program:

```java
/*
  Date   Name   EchoArgs: echo back input arguments
*/

public class EchoArgs {
    public static void main(String[] args) {
        for(int i = 0; i < args.length ; i++){
            System.out.print(args[i]);
            System.out.print(" ");
        }
        System.out.println();
    }
}
```

Try executing the program with input arguments

```
This is a test of my new program EchoArgs.
```

The words “This is a test of my new program EchoArgs.” are the input arguments to the program. They form an array (that is to say, a list) of 9 words (counted from 0 to 8, as computer scientists usually do), which are stored in the array `args`

Try running the program a few times, using different input arguments, to see that it works as expected. Then try the following experiments:

1. Change the command `System.out.print` to `System.out.println`. What happens?
2. Add a line before the line with the `for` statement that says: `System.out.println(args.length)`. What happens? Can you figure out what number is stored in `args.length`?
3. Change the initialization `i = 0` to `i = 1`. What happens? What happens if you change it to `i = 10`?
4. Change `i++` to `i += 2`. What do you think will happen? Does it?
5. Change the four references to \texttt{i} to \texttt{george}, e.g., \texttt{i++} becomes \texttt{george++}. What do you think will happen? Does it do what you expect?

6. Change the program to write out your input arguments in reverse order, so, if your input is \texttt{This is a test of my new program}, the program types back at you \texttt{program new my of test a is This}. It would be a good idea to \texttt{first} change the name of the \texttt{class} and do “Save As” (from the . . . menu) so that you do not overwrite your old \texttt{EchoArgs}. [Hint: Use \texttt{i--}. Remember that the items in an array are numbered from 0 to \texttt{length}-1. Try working out an example by hand, and ask a counselor for another hint if you are really stuck.]