

Program #3: Generic List

Modify your `List` class that you submitted for Program #2 to support generics such that it can store not just `integers`, but other types such as `floats` and `characters`.

Make a copy of your version of `List.java`, modify it to satisfy the new tests, and then submit the new improved version.

1. For this assignment, you will be provided with two files:

- `ListTest.java` contains the `main` function. You may **NOT** modify this file!
- `ListTest.out` contains the output from my implementation of the list class. You would be wise to ensure your output is **EXACTLY** the same (That includes spacing and formatting).

2. This assignment involves changing about **eight** lines in the node class and **twenty-two** lines in the `List` class so I expect you to complete it in under 30 minutes. But as some of you might have learned from Program #2, you do not want to wait till the last 30 minutes before it is due to start it.

3. Compiling `ListTest.java` should automatically use your `List.java` file (assuming they are in the same directory). After successful compilation, running the produced executable file **SHOULD** produce output identical to `ListTest.out`.

4. Feel free to redirect the output to a file of your choosing, and then compare the two files (i.e. `ListTest.out`, and your output file) using the command prompt with commands such as **diff**, **comm**, **fc**, or any other you deem appropriate)

For example, once completed, the commands below should **NOT** produce any output.

Windows:**fc**

```
javac ListTest.java
java ListTest > myOutput
fc ListTest.out myOutput
```

Linux: **comm**

```
javac ListTest.java
java ListTest > myOutput
comm -3 ListTest.out myOutput
```

Linux: **diff**

```
javac ListTest.java
java ListTest > myOutput
diff ListTest.out myOutput
```

```
javac ListTest.java
java ListTest | diff ListTest.out -
```