

Lab Report 4 - Challenge Tasks

1. Log into ieng6 [🔗](#)

```
leezz@Lisa MINGW64 ~/OneDrive/Documents/UCSD/WI23/lab7 (main)
$ ssh cs15lwi23akc@ieng6.ucsd.edu
Last failed login: Tue Feb 21 22:55:07 PST 2023 from 100.83.90.124 on ssh:notty
There were 2 failed login attempts since the last successful login.
Last login: Tue Feb  7 10:28:53 2023 from its-cseb270-24.ucsd.edu
```

The `ssh cs15lwi23akc@ucsd.edu` command was typed. Then I pressed `<enter>`.

2. Clone your fork of the repository from your Github account

```
[cs15lwi23akc@ieng6-202]:~:317$ git clone git@github.com:lpaulette/lab7.git
Cloning into 'lab7'...
remote: Enumerating objects: 30, done.
remote: Total 30 (delta 0), reused 0 (delta 0), pack-reused 30
Receiving objects: 100% (30/30), 371.09 KiB | 1.96 MiB/s, done.
Resolving deltas: 100% (9/9), done.
[cs15lwi23akc@ieng6-202]:~:318$
```

Keys pressed: `<up><up><up><up><up><up><up><up><enter>`. The `git clone git@github.com:lpaulette/lab7.git` command was 8 up in my history, so I pressed the up arrow 8 times and ran it.

```
[cs15lwi23akc@ieng6-202]:~:318$ cd lab7/
[cs15lwi23akc@ieng6-202]:lab7:319$
```

Keys pressed: `<up><up><up><up><up><up><up><up><enter>`. The `cd lab7/` command was 8 up in my history after the previous command was added, so I pressed the up arrow 8 times and ran it.

3. Run the tests, demonstrating that they fail

```
[cs15lwi23akc@ieng6-202]:lab7:340$ javac -cp ../lib/hamcrest-core-1.3.jar:lib/junit-4.13.2.jar *.java
[cs15lwi23akc@ieng6-202]:lab7:341$ java -cp ../lib/hamcrest-core-1.3.jar:lib/junit-4.13.2.jar org.junit.runner.JUnitCore TestListExamples
JUnit version 4.13.2
..E
Time: 0.529
There was 1 failure:
1) testMerge2(TestListExamples)
org.junit.runners.model.TestTimedOutException: test timed out after 500 milliseconds
    at java.util.Arrays.copyOf(Arrays.java:3210)
    at java.util.Arrays.copyOf(Arrays.java:3181)
    at java.util.ArrayList.grow(ArrayList.java:267)
    at java.util.ArrayList.ensureExplicitCapacity(ArrayList.java:241)
    at java.util.ArrayList.ensureCapacityInternal(ArrayList.java:233)
    at java.util.ArrayList.add(ArrayList.java:464)
    at ListExamples.merge(ListExamples.java:42)
    at TestListExamples.testMerge2(TestListExamples.java:19)

FAILURES!!!
Tests run: 2, Failures: 1
```

Keys pressed: <up><up><up><up><up><up><up><up><enter>. The `javac -cp ../lib/hamcrest-core-1.3.jar:lib/junit-4.13.2.jar *.java` command was 8 up in my history, so I pressed the up arrow 8 times and ran it. Then the `java -cp ../lib/hamcrest-core-1.3.jar:lib/junit-4.13.2.jar org.junit.runner.JUnitCore TestListExamples1` command was 8 up in my history so I accessed it and ran it the same way.

4. Edit the code file to fix the failing test

```
// Takes two sorted list of strings (so "a" appears before "b" and so on),
// and return a new list that has all the strings in both list in sorted order.
static List<String> merge(List<String> list1, List<String> list2) {
    List<String> result = new ArrayList<>();
    int index1 = 0, index2 = 0;
    while(index1 < list1.size() && index2 < list2.size()) {
        if(list1.get(index1).compareTo(list2.get(index2)) < 0) {
            result.add(list1.get(index1));
            index1 += 1;
        }
        else {
            result.add(list2.get(index2));
            index2 += 1;
        }
    }
    while(index1 < list1.size()) {
        result.add(list1.get(index1));
        index1 += 1;
    }
    while(index2 < list2.size()) {
        result.add(list2.get(index2));
        index2 += 1;
    }
    return result;
}
```

Keys pressed: `<up><up><up><up><up><up><up><up><enter>`. The `nano ListExamples.java` command was 8 up in my history, so I pressed the up arrow 8 times and ran it.

Then I pressed down until I ended up on the last `index1` in the code. Then I edited `index1` for `index2`. Then I pressed `<CTRL-O><enter><CTRL-X><enter>`.

5. Run the tests, demonstrating that they now succeed

```
[cs15lwi23akc@ieng6-202]:lab7:343$ javac -cp ../lib/hamcrest-core-1.3.jar:lib/junit-4.13.2.jar *.java
[cs15lwi23akc@ieng6-202]:lab7:344$ java -cp ../lib/hamcrest-core-1.3.jar:lib/junit-4.13.2.jar org.junit.runner.JUnitCore TestListExamples
JUnit version 4.13.2
..
Time: 0.014

OK (2 tests)
```

Keys pressed: `<up><up><up><enter>`. The `javac -cp ../lib/hamcrest-core-1.3.jar:lib/junit-4.13.2.jar *.java` command was 3 up in my history, so I pressed the up arrow 8 times and ran it. Then the `java -cp ../lib/hamcrest-core-1.3.jar:lib/junit-4.13.2.jar org.junit.runner.JUnitCore TestListExamples1` command was 3 up in my history so I accessed it and ran it the same way.

6. Commit and push the resulting change to your Github account

```
[cs15lwi23akc@ieng6-202]:lab7:345$ git add ListExamples.java
[cs15lwi23akc@ieng6-202]:lab7:346$ git commit -m "changed ListExamples"
[main e2a8ad9] changed ListExamples
Committer: Leeza P Gutierrez-Ramirez <cs15lwi23akc@ieng6-202.ucsd.edu>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:

    git config --global --edit

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

1 file changed, 1 insertion(+), 1 deletion(-)
[cs15lwi23akc@ieng6-202]:lab7:347$ git push
Warning: Permanently added the RSA host key for IP address '140.82.114.3' to the list of known hosts.
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 377 bytes | 377.00 KiB/s, done.
Total 3 (delta 1), reused 2 (delta 1), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To github.com:lpaulette/lab7.git
0214309..e2a8ad9 main -> main
```

Keys pressed: `<up><up><up><up><up><up><up><up><enter>`. The `git add ListExamples.java` command was 8 up in my history, so I pressed the up arrow 8 times and ran it. Then the `git commit -m "changed ListExamples"`

was 8 up in the history so I accessed it and ran it the same way. And finally, I accessed and ran the command `git push` the same way.