

INFO 6205

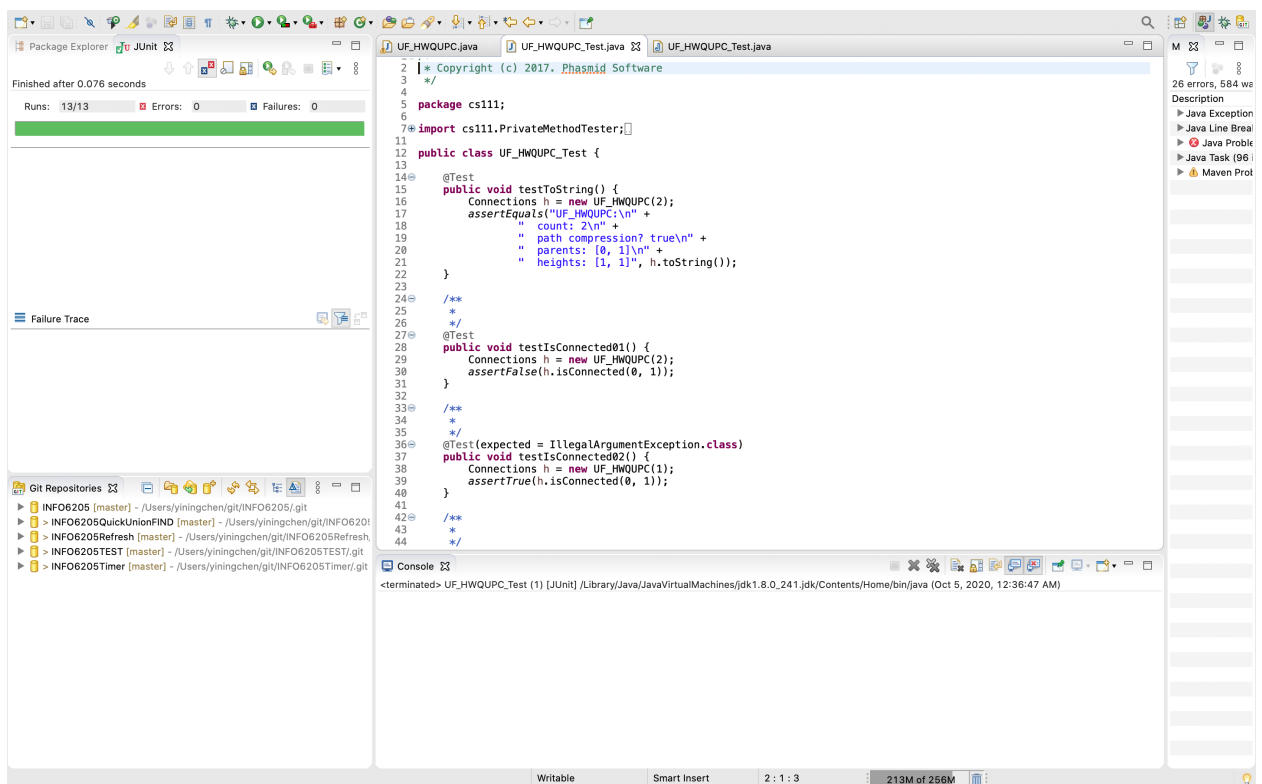
Program Structures & Algorithms

Fall 2020

Assignment No 3

- Screenshot of Unit test passing

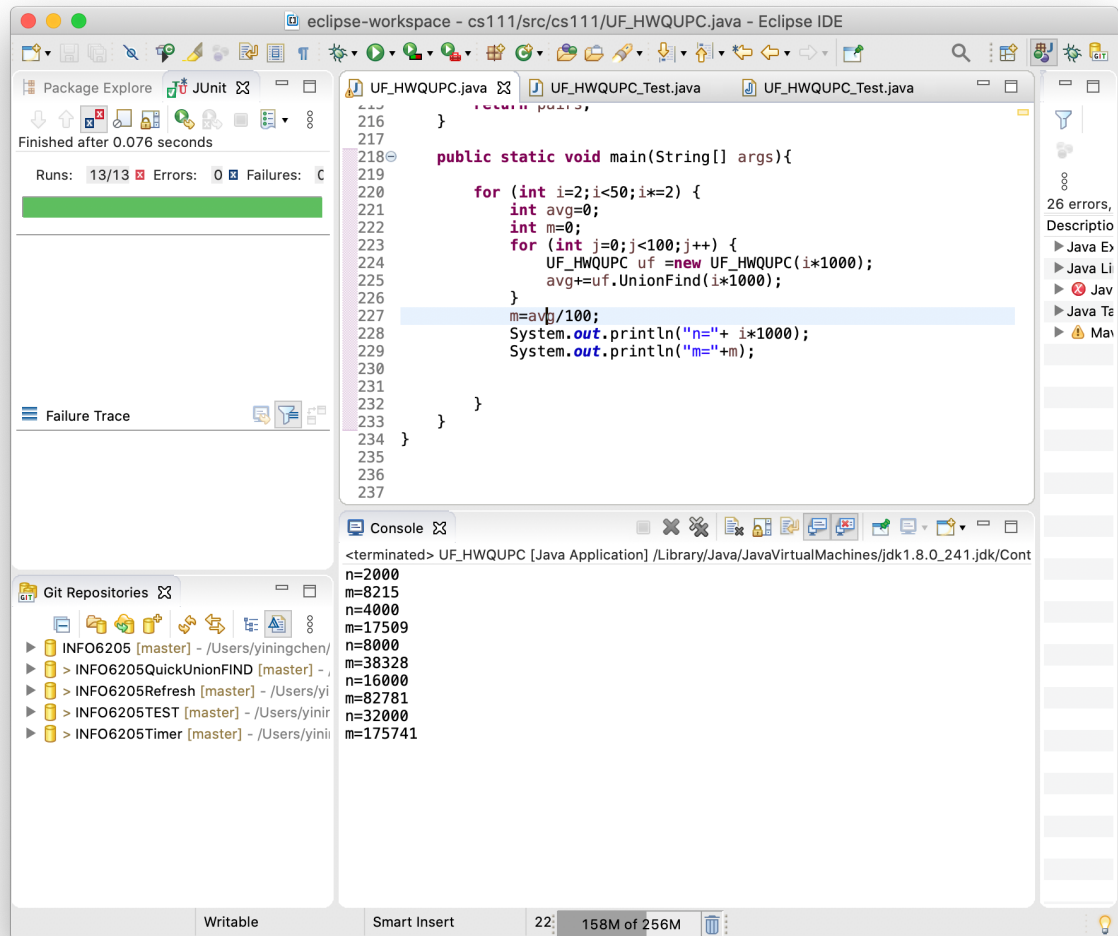
UF_HWQUPC_Test



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Code Running:



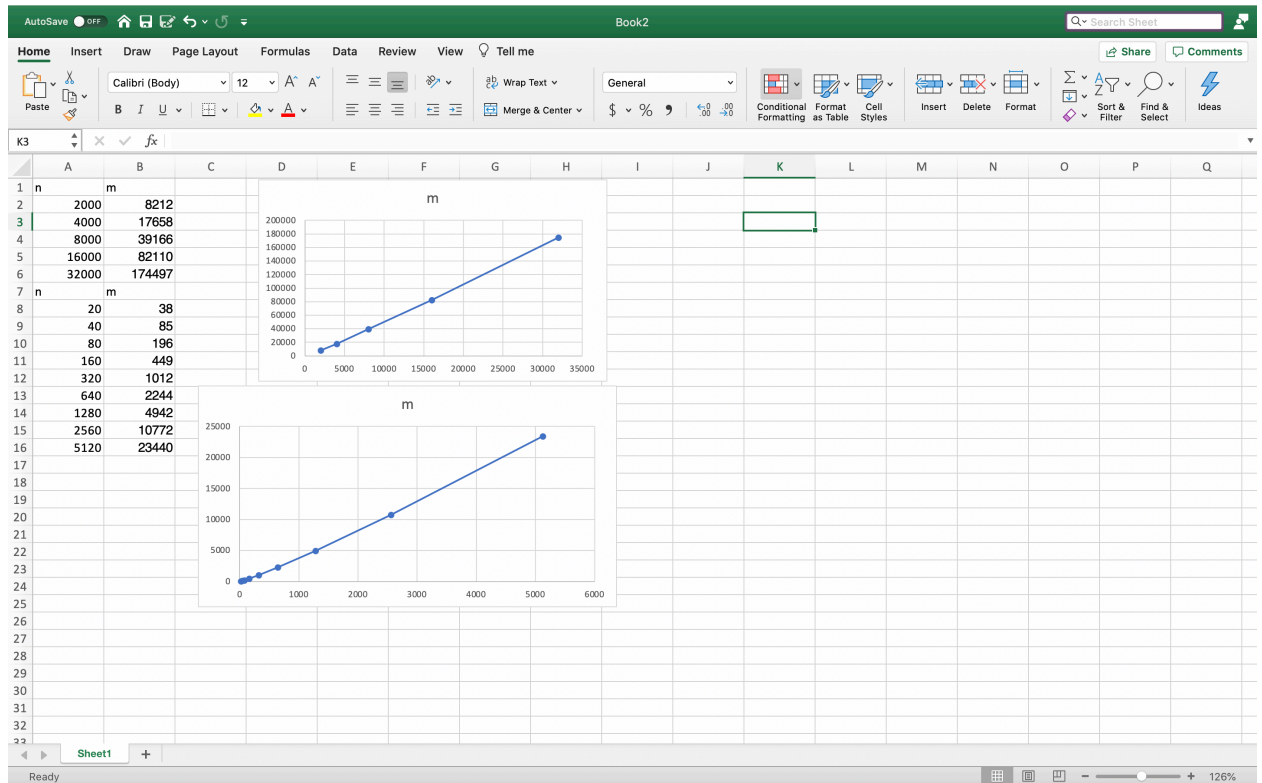
The screenshot shows the Eclipse IDE interface with the following components:

- JUnit View:** Displays the execution results of the JUnit tests. It shows "Finished after 0.076 seconds", "Runs: 13/13", "Errors: 0", and "Failures: 0".
- Code Editor:** Shows the source code of the `UF_HWQUPC.java` file. The code is as follows:

```
216 }
217
218 public static void main(String[] args){
219     for (int i=2;i<50;i*=2) {
220         int avg=0;
221         int m=0;
222         for (int j=0;j<100;j++) {
223             UF_HWQUPC uf =new UF_HWQUPC(i*1000);
224             avg+=uf.UnionFind(i*1000);
225         }
226         m=avg/100;
227         System.out.println("n="+ i*1000);
228         System.out.println("m="+m);
229     }
230 }
231 }
232 }
233 }
234 }
235 }
236 }
237 }
```
- Console View:** Displays the output of the Java application. The output is as follows:

```
<terminated> UF_HWQUPC [Java Application] /Library/Java/JavaVirtualMachines/jdk1.8.0_241.jdk/Cont
n=2000
m=8215
n=4000
m=17509
n=8000
m=38328
n=16000
m=82781
n=32000
m=175741
```
- Git Repositories View:** Shows a list of Git repositories, including `INFO6205 [master]`, `INFO6205QuickUnionFIND [master]`, `INFO6205Refresh [master]`, `INFO6205TEST [master]`, and `INFO6205Timer [master]`.

Prove of relationship



The relationship of m and n is close to linear.