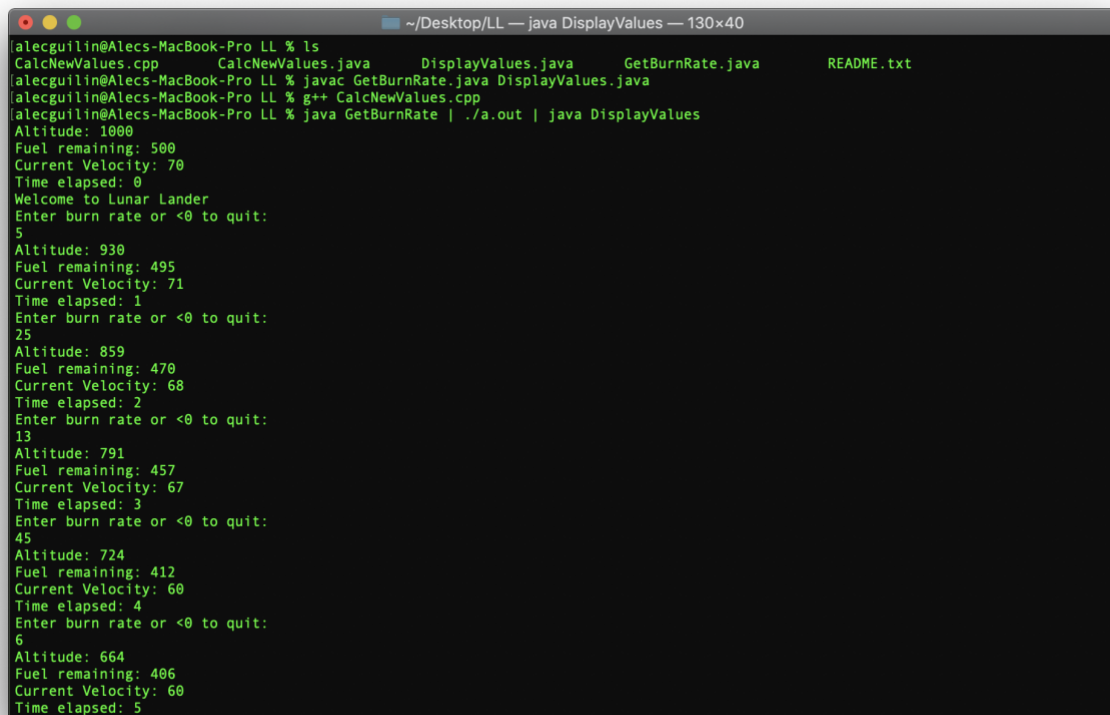


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CS 441

Assignment 4 Individual Portion

Pipe-And-Filter: This architecture consists of components that act as filters that transform the data before passing it on via pipes or connectors to other components. In this assignment, we demonstrate this by using two java files and one c++ file. Once all of the files are compiled, we can then run all 3 programs together using the pipe and filter architecture by running each program separated by a '|'. This allows the output of one program to be used as the input of the next program.



```
alecguilin@Alec-MacBook-Pro LL % ls
CalcNewValues.cpp  CalcNewValues.java  DisplayValues.java  GetBurnRate.java  README.txt
alecguilin@Alec-MacBook-Pro LL % javac GetBurnRate.java DisplayValues.java
alecguilin@Alec-MacBook-Pro LL % g++ CalcNewValues.cpp
alecguilin@Alec-MacBook-Pro LL % java GetBurnRate | ./a.out | java DisplayValues
Altitude: 1000
Fuel remaining: 500
Current Velocity: 70
Time elapsed: 0
Welcome to Lunar Lander
Enter burn rate or <0 to quit:
5
Altitude: 930
Fuel remaining: 495
Current Velocity: 71
Time elapsed: 1
Enter burn rate or <0 to quit:
25
Altitude: 859
Fuel remaining: 470
Current Velocity: 68
Time elapsed: 2
Enter burn rate or <0 to quit:
13
Altitude: 791
Fuel remaining: 457
Current Velocity: 67
Time elapsed: 3
Enter burn rate or <0 to quit:
45
Altitude: 724
Fuel remaining: 412
Current Velocity: 60
Time elapsed: 4
Enter burn rate or <0 to quit:
6
Altitude: 664
Fuel remaining: 406
Current Velocity: 60
Time elapsed: 5
```

to compile:

```
javac GetBurnRate.java DisplayValues.java
g++ CalcNewValues.cpp
```

to run:

```
java GetBurnRate | ./a.out | java DisplayValues
```