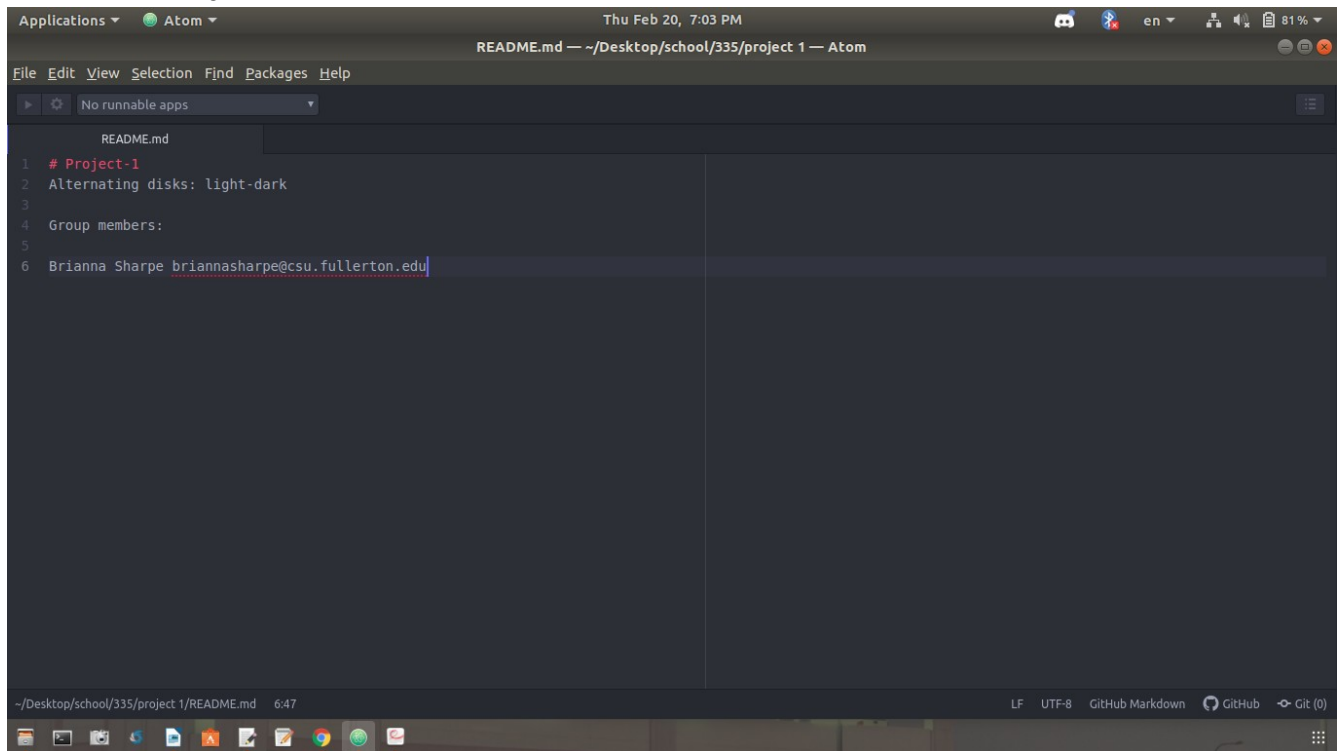


1. Your names, CSUF-supplied email address(es), and an indication that the submission is for project 1.

Report for Project 1

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2. A full-screen screenshot, inside Tuffix, showing the Atom editor or the editor you used, with your group member names show clearly as below. One way to make your names appear in Atom is to simply open your README.md.



```
Applications ▾ Atom ▾ Thu Feb 20, 7:03 PM
README.md — ~/Desktop/school/335/project 1 — Atom
File Edit View Selection Find Packages Help
▶ ⚙ No runnable apps
README.md
1 # Project-1
2 Alternating disks: light-dark
3
4 Group members:
5
6 Brianna Sharpe briannasharpe@csu.fullerton.edu
```

3. Two pseudocode listings, for the two algorithms.

```
sort_left_to_right():  
    assert  
    after = before  
    int swaps = 0  
  
    while !sorted  
        for i=1 to n do  
            if i == dark && i+1 == light  
                swap()  
                swap++
```

```
sort_lawnmower():  
    assert  
    after = before  
    int swaps = 0  
  
    while !sorted  
        (forwards)  
        for i=1 to n-1 do  
            if i == dark && i+1 == light  
                swap()  
                swap++  
  
        (backwards)  
        for i=n-1 to 1 do  
            if i-1 == dark && i == light  
                swap()  
                swap++
```

4. A brief proof argument for the time complexity of your two algorithms.

```
sort_left_to_right():
    assert -1 t.u
    after = before -1 t.u
    int swaps = 0 -1 t.u

    while !sorted
        for i=1 to n do -n times
            if i == dark && i+1 == light -3 t.u
                swap() -5 t.u
                swap++ -1 t.u

sort_lawnmower():
    assert -1 t.u
    after = before -1 t.u
    int swaps = 0 -1 t.u

    while !sorted
        (forwards)
        for i=1 to n-1 do -n-1 times
            if i == dark && i+1 == light -3 t.u
                swap() -5 t.u
                swap++ -1 t.u

        (backwards)
        for i=n-1 to 1 do -n+1 times
            if i-1 == dark && i == light -3 t.u
                swap() -5 t.u
                swap++ -1 t.u
```