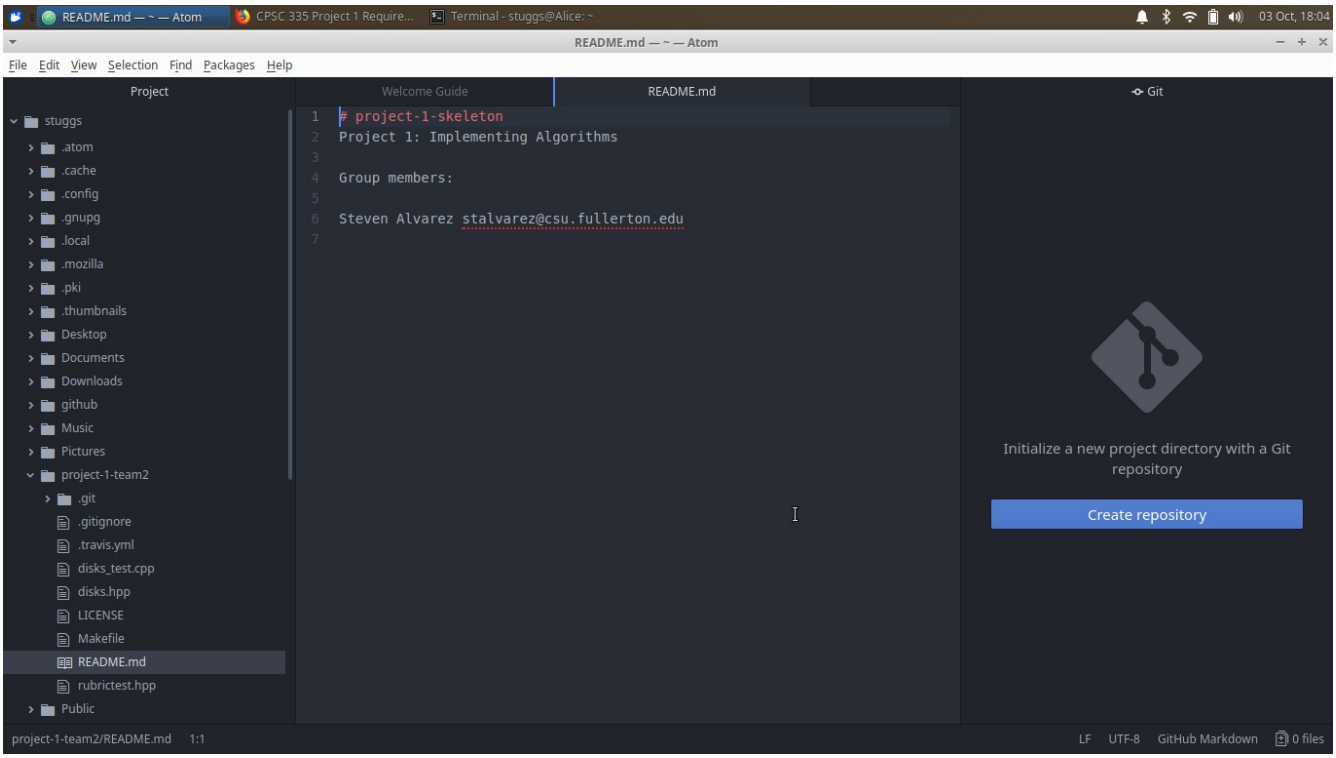
315 Project 1 PDF

Steven Alvarez
stalvarez@csu.fullerton.edu



left_to_Right(Vector n)
1 swaps = 0
n for(x= 0; x < sizeof.n; x++)
n for(i = x; I < sizeof.n – x; i++)
3 swap n[i] with n[i+1]
1 swaps++

Time complexity of left_to_Right: O(1+n(n+3+1))
Solve: O(1+ n^2 +3n +n)
O(n^2+4n+1)
Drop Inconsequential terms:O(n^2)

lawnmower(Vector n)
1 swaps = 0
1 front = 0
1 back = sizeof.n
n/2 while(front != back)
n/2 for(int I = front; I < back; i++)
3 swap n[i] with [i+1]
1 swaps++
1 front++
1 back--
n/2 for(int z = back; z > front; z--)

3 swap n[z] with n[z-1]
1 swaps++
1 front++
1 back--

Time complexity of lawnmower: O(1+1+1+n/2(n/2+3+1+1+1+n/2+3+1+1+1))
Combining Like Terms:O(3+n/2(n+12)
Solve: O(3+n^2 + n/6)
Drop Inconsequential terms:O(n^2)