NAME: MD HASIB ULLAH KHAN. ALVIE

ID: 22101271

Section: 28

LAB 1

For all the tasks, I had a few common things
done each times.

I created two paths: one for input and other
for the output files and sometimes I used
open(path, 'x') to create them.

I also, used readlines and writelines whatever
I needed them as readlines created a list
for me which I can manipulate according
to my needs.

Nothing special was required for task 1a, 1b and 2.

But for task 3, we had to run Bubble Sort in $O(n)$ which is usually in $O(n^2)$. We considered the base case scenario where the array is already sorted.

We just had to add an exception to the regular bubble sort algorithm to avoid running inside the loop if the array is already sorted.

For the last task — task 4, I started with the readliness and creating a list. But this time, I had a few more things to worry about as the list contained a lot of info at the same time. So I used tuple

assigning method for my advantage and created 3 new lists which were: home, location and time on which I used the lexicographical sorting and I took care of the priority levels. Finally added them back and created the output file as needed.