**STEPS TO TAKE FOR PROJECT 1:**

**Note:** The data structures used are suggestions, if you want to use others feel free.

**1)**Take the inputs given from the text file and store them in a data structure (a 2D array would be a good choice if you need a quick one).

**2)** Generate all possible permutations of the stable matches and store them in a data structure (maybe another 2D array)

- example “possible solutions for n=2:

S = {(m1, w1) , (m2,w2)} //// S = {(m1,w2), (m2,w1)}

- Store all possible solutions in a 2D matrix

n = 2 ==> 2 possible solutions (2,2)

n = 3 ==> 6 total possible solutions (6, 3)

n = 4 ==> 24 possible solutions (24, 4)

**3)** Loop through all possible solutions and check to see if they are valid

- Go person by person in your solution set and check if they are stable

- If everyone in a “possible” solution is stable then increment your answer by 1

- If someone is not stable, the entire solution you are checking is not valid and you can move on

**4)** Return your answer at the end of the run