Name: Mubashar Khan, Nelson Nyugen, Andrew Nyugen **Assignment #:** 1B

Summary of Problem Statement

Problem # _____

There are two primary challenges that engineers that are working on carbon sequestration face. We need to develop an efficient and cost effective method to capture the CO2 molecules in the air and we need to develop a way to store or make use of the captured CO2. It will take the combined efforts of engineers of many disciplines to create a cost effective and efficient solution to the one of the most significant threats to our way of life. We need to analyze the data gathered and determine if cost effective solutions are available for mass production and use.

Known / Input

Dataset.xlsx

Cost of capturing CO2 emissions

Amount of CO2 gathered

Power used to gather CO2

Unknown / Output

best and worst CO2 gathering devices

Various information that user chooses

Assumptions

Assuming all data was accurate at the time when it was collected

1 USD = 104.166 Yen

Other Variables

None

Algorithm

1. Start
2. User is given option to see the actual excel file
3. If user chooses to see it, they will be given a warning that changing an data could cause the program to have and error
4. User is asked if they would like to see the data analyzed; if the user chooses yes, the program opens a menu
5. Additionally when the program is started an initial calculation occurs where the best and worst devices are found
6. The menu gives the user 5 options to choose from. 4 of the 5 options conduct calculations which then output results while the 5th option creates a graph of the total amount of carbon collected each day.
   - Option 1: Continent with the most carbon captured
   - Option 2: Most common used method of capturing/cleaning the carbon
   - Option 3: Average carbon captured or stored per day
   - Option 4: Average power used to capture carbon emissions
   - Option 5: Graph of carbon captured in each continent
7. If at any point the user closes out of this main menu, the program will be terminated
8. Via Controls put into place, the user is limited to using the main menu 10 times
9. Two graphs are created if the user selects option 5. This is because one graph has actual data values while the other serves as a visual aid in understanding to an extent the difference in the amounts of carbon emissions collected by various continents.
10. End

Test Cases

TEST CASES ARE ON THE PDF CALLED TEST CASE. THERE WASN'T ENOUGH ROOM HERE AND I COULDN'T COMBINE THE 2 FILES TOGETHER.