



CARB CALC

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The problem of carbon emissions roots from a greater problem of global warming. Global warming is essentially the heating of the planet due to industrial tasks, commonly, burning fossil fuels. Global warming has many effects such as the loss of habitat for many animals, increased sea levels, and believe it or not, higher taxes. The main factor of global warming is carbon emissions. When carbon is emitted, it goes up into the atmosphere and creates a barrier-like field, trapping heat in. This causes the temperature to rise, leading to global warming. This can all be reduced with a decrease in carbon emissions per person. It should also be understood that almost everything electronic runs on electricity that is most likely emitting carbon. It is estimated that computers release 175 kg of carbon per year. This number can be reduced with the awareness of the problem and its effects. The following program hopes to spread awareness as a solution to this problem.



CarbCalc allows users to calculate their carbon emissions on an annual basis. The program uses credited data provided by official governments to calculate these carbon emissions. Graphical representations are also available for the data, further allowing flexibility among the users and providing comparative models. The ultimate goal of this product is the same as our company's, to make the world a better and more educated place. Noticing the effects of global warming and how we are contributing towards it, helps grow awareness for this problem and hopefully reduces the effects. Thus, CarbCalc will do just this, grow awareness and reduce the effects of global warming.



1. When opening the program in an IDE, a GUI for Matplotlib will most likely open, that should be minimized, where only the terminal is visible.
2. The initial input statement of the program will prompt the user to enter the number of items they'd like to calculate the emissions for. This should only be an integer like 5 and not "five".
3. If the above number is greater than 0, then the next initial input will be to choose the number of the item to enter first. This should also be an integer number between 0-3.
4. Depending on the item selected, further input will be requested for the usage of the item, this will also be an integer value. An exception to this is if the item Vehicles is selected, where the fuel type should be specified first as displayed.
5. Steps 3-4 are repeated for the items still remaining to be inputted.
6. Once all data has been inputted, calculations will be made, and the user will be prompted to enter the amount of data representations they would like. This is similar to step 2, where the number should also be an integer, but between 1-3.
7. The program will ask the user to enter the number associated with the data representation they would like as many times as the number inputted in step 6. This should also be an integer value like step 3.
8. All user input is completed and the data representations are saved as a file with names listed on the program.

WORKS CITED (MLA)

Program Sources:

"Code Faster with Line-of-Code Completions, Cloudless Processing." Kite, www.kite.com/python/answers/how-to-generate-a-random-color-for-a-matplotlib-plot-in-python.

Coppola, Published by Daniela, and Apr 26. "Food Emissions Intensity by Category 2011-2017." Statista, 26 Apr. 2020, www.statista.com/statistics/1072394/food-emissions-intensity-by-category/.

"Overview." Overview - Matplotlib 3.4.1 Documentation, matplotlib.org/stable/contents.html.

"Python 3.9.4 Documentation." 3.9.4 Documentation, docs.python.org/3/.

Tabulate. pypi.org/project/tabulate/.

https://www.winnipeg.ca/finance/findata/matmgt/documents/2012/682-2012/682-2012_Appendix_H-WSTP_South_End_Plant_Process_Selection_Report/Appendix%207.pdf

Report Sources:

March 15, 2016 Melissa Denchak. "Are the Effects of Global Warming Really That Bad?" NRDC, 20 Jan. 2021, www.nrdc.org/stories/are-effects-global-warming-really-bad.

Ritchie, Hannah, and Max Roser. "CO₂ and Greenhouse Gas Emissions." Our World in Data, 11 May 2020, ourworldindata.org/co2-and-other-greenhouse-gas-emissions#:~:text=Global%20average%20temperatures%20have%20increased,%E2%84%83%20since%20pre%2Dindustrial%20times&text=Human%20emissions%20of%20carbon%20dioxide,the%20world's%20most%20pressing%20challenges.&text=But%20overall%2C%20this%20temperature%20rise,of%201%20to%201.2%E2%84%83.

"Why Your Internet Habits Are Not as Clean as You Think." BBC Future, BBC, www.bbc.com/future/article/20200305-why-your-internet-habits-are-not-as-clean-as-you-think.