**<Partner 1 name here> and <Partner 2 name here>**

Assignment 8, SENG 201, Fall 2024

## Task 1 – Investigating an Error Message

Run the Python code on the assignment page: <https://llayman.github.io/seng-201/assignments/assn8/>

Go to <https://google.com> and paste TypeError: can't multiply sequence by non-int of type 'float' into the search box. Your primary goal is to understand the error *and* how to fix it.

1. Which *unique* websites are in your top 10 search results? Provide only the domain, e.g., stackoverflow.com or medium.com, not the entire URL or page title.
2. Paste the full URL of your #1 result.
3. Go to the first result that points to the website stackoverflow.com
   1. Which number result is this?
   2. Paste the full URL of the page:
   3. Did you find a satisfactory explanation of the issue in your opinion?
   4. Who is the author of the top reply on stackoverflow? Click on their profile or Google them.
   5. Do you think the author is credible or not? Why do you think this?
4. Go to the first result from the domains freecodecamp.com or medium.com.
   1. Which number result is this?
   2. Paste the full URL of the page.
   3. Did you find a satisfactory explanation of the issue in your opinion?
   4. Who is the author of the page or response? Click on their profile or Google them?
   5. Do you think the author is credible or not? Why do you think this?
5. Describe in your own words what happened on line 3 that caused the error.

## Task 2 – Understanding an Error Message

Do you understand what a TypeError represents? Let’s learn more.

1. Go to google.com and search for python TypeError. Click on the link to the python.org “Built-In Exceptions” page and read the definition of TypeError. Explain ***in your own words*** what a TypeError is:
2. Go back to google.com search for python TypeError again. Click on the first link that is ***not*** python.org.
   1. Paste the full URL of the page.
   2. Who is the author of the page or response? Click on their profile or Google them.
   3. How does their explanation differ from the official description? What additional info do they provide?
   4. What other *types* of content is on this page? Are there images? diagrams? Videos? Ads? Memes?
3. Finally, go to <https://chatgpt.com>.
   1. Type in the prompt: “Explain what a TypeError in Python is?”
   2. Describe some of the differences in ChatGPT’s response to the python.org and blog responses.
   3. What, exactly, does the disclaimer at the bottom of ChatGPT’s page say?
4. Which site would you consider to be most *authoritative*? Why?
5. Which site would you consider to be most *user friendly*? Why?
6. Which site do you prefer overall? Why?

## Task 3 – Researching a Solution

Researching *how* to accomplish something is different than researching an error. You will often find multiple approaches, and likely some of them will not apply to you. When a recommendation *does* apply, you will often have to adapt it to your specific program.

**Scenario**: You need to sort a Python dictionary by its keys. How can you accomplish this? For example:

Starting dictionary: start={'b': 2, 'a': 1, 'c': 3} # the keys are ‘b’, ‘a’, ‘c’.

End: end={'a': 1, 'b': 2, 'c': 3}

1. Identify *three* distinct sources: websites, videos, and AI are all allowed. Put the URL and the search string or prompt you used with each source.
2. What are the possible approaches to solving the problem? Provide short code samples.
3. Why would you choose one approach over another?
   * Stackoverflow comments often provide discussions that may inform the “best approach”.
   * If watching a video or reading a blog, perhaps they have ideas about the tradeoffs there?
4. Which one would *you* choose? Why?
5. Finally, suppose I tell you that you will be given an in-depth quiz on every facet of your choice in #15: every built-in function call, and every bit of syntax. What *additional* searches would you want to research?