MScFE 600 FINANCIAL DATA

Group Work Project # 2

See grading rubric here.

Scenario

You are helping your coworkers better understand Python data structures. Create a study aid, then use this to redo GWP 1 in Python.

Tasks

Step 1: Explain one of the Python data structures to one of your fellow group members. Student A explains to B; student B explains to C; student C explains to A. As part of your explanation, include:

- Lists, trees, dictionaries, arrays, **or** similar data structures.
- Use your data structure to show how to solve a problem from your readings, examples from websites, or your own coding exercises.
- List its advantages and disadvantages.

Step 2: Individually, create a 3-page study aid for best practices with your data structure. Include the following:

- Page 1: Define a data structure. Show how to create it, subset it, modify it, etc.
- Page 2: List the structure advantages and disadvantages.
- Page 3: Create a 1-page study-aid / crib-sheet for best practices with your data structure.

Step 3: In groups, create a Jupyter notebook that shows the mortgage problem solved in Python. Make sure to:

- Illustrate how your data structure is used to solve the problem from GWP 1.
- Ensure that your results match the results from the spreadsheet.

Submission requirements and format

One team member submits on behalf of the entire group the following items:

1. **1 PDF document*** with individual answers from steps 1 and 2.
    a. Use the available Report Template and fill out the required information on the first page
2. A **zipped folder** including:
    a. .ibynb executable Jupyter notebook**
    b. 1 PDF document **with the output** from the Jupyter notebook. To include the output, RUN the code before downloading the PDF.

** **Use Google Docs to collaborate**. Start by uploading the Report Template provided in the Course Overview. Once your report is completed, click File → Download → PDF Document (.pdf) to obtain the copy for your submission.*

*** **Use Google Colab or GitHub to collaborate** in completing the executable Python program.*

*The PDF file with your report must be uploaded **separately** from the zipped folder that includes any other types of files. This allows Turnitin to generate a similarity report.*

Rubric

Your instructor will evaluate your group submission for GPW1 using the following rubric:

Quantitative Analysis (open-ended questions) 40 Points	Technical and Non-technical Reports 30 Points	Writing and Formatting 20 Points
The group is able to apply results, formulas, and their knowledge of theory to real-life finance scenarios by doing the following: ● Providing all the necessary information to support their arguments ● Presenting arguments that reflect group discussion and research. ● Using authoritative references to support a position and provide updated information ● Concluding with practical takeaways for more insightful financial decision-making	Technical Reports contain 3 parts: 1) summary of key results; 2) interpretation of results; and 3) the recommended course of action that can reasonably follow from those results and interpretations. **Note**: Technical reports will include the technicalities of models, such as names, methods of estimation, parameter values, etc. and exclude generalities about the work done. It should **NOT include the names of Python code that was used.**	A submission that looks professional should include: ● The axes labels and scales in graphs. ● No significant grammar errors or typos. ● Organized, clear structure, and easy to read document. ● Proper citations and bibliography using MLA format.
	Non-technical Reports contain 3 parts: 1) clear explanation of results; 2) the recommended course of action that follows; and 3) the identification of factors that impact each portfolio. **Note**: AVOID all references to model names, algorithms, unnecessary details, and focus on the investment decision.	