**MSBA 232 — Programming for Data Science (Section 1)**

**University of the Pacific**

**Fall 2024**

**Final Project Instructions**

**Due: Wednesday December 11, 2024**

Instructions:

Each group needs to turn in one electronic version (Word Document) of the final project report by Wednesday December 11. (Upload your report as an attachment to link of **Final Project Report Word Document** on Canvas (Under the Category of Assignments)). The attachment title should be: MSBA 232-Report.

About the Contents:

The report should be written in an **organized and logical way.** The report should be written in the form of an academic paper in a Word Document. It can not exceed 20 pages and fewer than 5 pages. The body of the report should be formatted as double spaced, size 12, Times New Roman. Margin: 1.0 inch for right, left, bottom, and top. **You need to add the line (row) number and page number.**

The first page of your report should be a cover page. On the cover page, you need to have a title of this project (the title should be named by your group) and the full names of the group members.

The template specifies each of the sections that needs to appear on the project report.

Grading:

Full credits: 35

The grading of final project report is based on contents (30 points) and formatting (5 points).

Overview and Example of the Project:

The project topic is quite open. The purpose of this project is to let you practice the python programming you learned from my class. Each group is like a software designer. You can think how your project (and the code / program behind the project) can help a business or manager to achieve some functions. The program would be python based. You can apply some of the coding skills you learned my class. There is a template under the assignment folder and under Group Project Report Submission. It specifies for each section what you should write. For example, at the beginning section, you may want to introduce the background of your project. Then, you can talk about the purpose of the project (want to achieve what kind of function), then start writing and analyze the project (show the code or screenshot), and then find the output and have a discussion based on that.

If you look back the entire semester for the python programming you learned, the first half of the semester we were discussing more about the strings (text), and the second half of the semester we are discussing more the numerical functions. Your project hopefully can incorporate some functions you learned from each of the week to be included in the software package and have some business sense (background).

As an example. I am software engineer, and I would like to help a service provider (e.g., restaurant manager) to create a software package to automatically make an advertisement in front of the restaurant.

Then, on the advertisement board, you can write (program):

Welcome: “Consumer Names (as a text variable)!” to my restaurant (restaurant name as a text variable). Today is Monday (using a text variable to replace if it is Tuesday or so on). Today’s menu is “Create another text variable to list the menu.” The price is (Create a numerical function to show the sum or the three dishes in the menu).

Then the manager could easily change the advertisement board by defining the variables based on the situation.

I highly encourage you to make some progress each week toward the final project. Please include a screenshot of the program input and output and coding in your project report.

Please try to incorporate and combine as many Python functions (e.g., if, while, for loop functions, user input / interface, calculator, variable definition, and so on) you learned in my course as possible in this semester and feel free to explore more.

**Title Page**

Includes the title of the report and each group members’ full name.

**TITLE**

**Abstract:**

A brief summary of the report.

**Keywords:**

The words you think are important in your report. The keywords show the topic of your report. Usually 3-5 keywords.

1. **Introduction / Background**

The contents should include, but not limit to:

Please describe the problems / topic you investigate in this project.

1. **Project Objective**

In this section, you need to clarify the objective of your Python programing. What do you want to find out?

1. **Data / Problem Analytics**

***3.1 Data***

Please describe the data source and the approach you collect the data (you can collect or create your own data if you want). The data could be numbers of texts (strings).

***3.2 Methods***

In this section, you need to describe which functions you use in Python.

***3.3 Results of Problem Analytics***

In this section, you will show how the data / problem is analyzed using the methodology in section 3.2. You can discuss your results and provide a Python screenshot of the outputs.

1. **Implications and Conclusions**

In this section, you need to summarize your findings. And please discuss whether these findings have some managerial implications (can help business managers to improve the process / organization).

1. **Idea Sharing**

In this section, please feel free to add any ideas, comments, or insights during the project preparation and conduction process / experience. For example, what do you learn from doing this project? How do you think the application of Python in the real-world business?, and etc.

1. **References**

If you cite some references in the report, you can list them here.

1. **Appendix**

In this section, please list a weekly schedule for you to finish this project. An example of table is as follows:

|  |  |
| --- | --- |
| **Time** | **Contents** |
| September 14, 2024 | Project Group Forms |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
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| December 11, 2024 | Final Project Paper Submission |