Due: 11:59pm Friday, March 14

Instructions

- One (1) report per team is required; the team lead must upload the file to the assignment section of the course homepage at https://classes.pace.edu.
- Create a file named "CS696A_WR2_{TeamName}.docx" (i.e., if your team name is "ABC", the file name is "CS696A_WR2_ABC.docx"); all three (3) exercises must be completed inside the same file.

Exercise 1: Database Design [30 pts]

Identify all the data that must be stored inside the database. Key questions you must consider are:

- How many data tables are required?
- What does each data table represent?
- For each item in the table, what fields or attributes are required?

The questions above aren't meant to be exhaustive; if you believe more details must be provided describing your data, feel free to add additional information.

Grading Rubric

Per each grading criterion, the top 25% will receive "A", the middle 50% will receive "B", and the rest will receive "C". No submission or omission of the exercise will result in zero (0).

Grading Criteria	Description	Scores
Technical Soundness [20 pts]	Describe why certain data items must be stored in the database, and why certain fields or attributes are required for the individual items.	A: 20pts B: 18pts C: 16pts
Requirement Coverage [10 pts]	The comprehensiveness of written discussion across all the data items necessary for the requirements proposed in Written Report 1.	A: 10pts B: 9pts C: 8pts

Exercise 2: Requirement Analysis [50 pts]

Based on Written Report #1 and the requirements outlined, explain how the database design from Exercise 1 will support key requirements. There are requirements that don't necessitate database calls or connections; such requirements can be ignored for this exercise. Choose at least 5-7 requirements that rely heavily on the data stored in the database tables.

As a suggestion, for this exercise, focus on the requirements that require the data from multiple database tables and/or the ones that use the relationship between the items stored in different tables. For example, as seen during Week 7 lecture in TikTok example, assuming Videos and Users are stored in separate databases, you can focus on how "a user liking a video" will be represented in the database and implemented in a software logic.

Grading Rubric

Per each grading criterion, the top 25% will receive "A", the middle 50% will receive "B", and the rest will receive "C". No submission or omission of the exercise will result in zero (0).

Grading Criteria	Description	Scores
Technical Depth [30 pts]	For the complicated requirements utilizing the data from multiple database tables, the depth of explanation on how such requirements can be implemented across the system.	A: 30pts B: 27pts C: 24pts
Requirement Coverage [20 pts]	The comprehensiveness of written discussion across all the requirements proposed in Written Report 1.	A: 20pts B: 18pts C: 16pts

Exercise 3: Database Technology Choice [20 pts]

Based on your answers in Exercise 1 and 2, explain your reasoning on what database technology (relational or non-relational) you will choose for the implementation. Provide tradeoff analysis (i.e., explain why the option you aren't choosing isn't suitable to deliver your requirements).

Grading Rubric

Per each grading criterion, the top 25% will receive "A", the middle 50% will receive "B", and the rest will receive "C". No submission or omission of the exercise will result in zero (0).

Grading Criteria	Description	Scores
Tradeoff Analysis [20 pts]	Explain why you are choosing the recommended database technology to build your product. If you are choosing a specific database (e.g., MySQL, DynamoDB, MongoDB, etc.), feel free to describe how the chosen database supports your reasoning.	A: 20pts B: 18pts C: 16pts