

# GROUP PROJECT 1

Develop insightful problems that can be used as a specification so that it may be given to any developer to create queries to resolve to provide resolution to the problem.

Also, it teaches the group how to investigate a new database system as if the business just acquired a new business. The IT department will be required to learn this new system for maintenance and enhancement purposes.

Learning how to work as a team and the concept that the team is more important than any individual. Exposure to working in a delegation model.

This assignment will leverage your understanding of Chapters 2, 3 and 6 as the basis for creating the queries

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## Non-technical Project Objective

### Teamwork and Collaboration:

- ✓ It is crucial to learn how to work effectively as a team, promoting collaboration and cooperation.
- ✓ Support each other in achieving mutually agreed-upon deliverables to ensure project success.
- ✓ Acquire skills in working efficiently in virtual meetings using tools like Microsoft Teams, Zoom, GoToMeeting, etc.

### Professionalism and Reliability:

- ✓ The industry values team players who exhibit professionalism and adhere to ethical standards.
- ✓ Being reliable and meeting deadlines are essential traits sought after by employers.

## Project Tracking techniques documentation using Excel and Word

1. Provide meeting notes (Word document) with an agenda and attendance.
2. Develop a to-do list for the team members using the To-do list. Each project in the worksheet will be the name of the group member and their responsibilities for the project and due dates.
3. Track the deliverables by the original due date and revise due by with notes explaining the delay.

To-do list			
To be completed by		Name	Notes
Classmate	Project 1		
To Do	Done	Status	Notes
100%	Planning		
100%	Preparation		
100%	Task 1		
100%	Task 2		
100%	Task 3		
100%	Task 4		
100%	Paperwork		
100%	Read-off		
100%	Following		

To-do list for projects

## GROUP PROJECT 1

	A	B	C	D	E	F	G	H
1	To-do list							
2								
3	To be completed by:					Name		
4	Deadline:					Date		
5								
6	Project 1							
7	% done	Phase	Start By	Original Due By	Revised Due By	Number Of Days	Revision Notes	
8	100%	Planning						
9	75%	Preparation						
10	50%	Task a						
11	25%	Task b						
12	0%	Task c						
13	0%	Task d						
14	0%	Paperwork						
15	0%	Hand-off						
16	0%	Follow-up						

4. Utilize Gantt Project planner to track the summarized progress of the project.
  - a. The project will be managed by the project manager and shared with the group team.
  - b. Define individual tasks for each group member as activities in the Gantt Project planner.
  - c. Create a convention to track delays effectively. Consider devising a system to mark and monitor delays.
  
5. Convention for tracking delays (sub-bullets):
  - a. Identify the reason for the delay (e.g., resource constraints, technical issues, dependencies).
  - b. Assign responsibility for addressing the delay to the relevant team member.
  - c. Set a new estimated completion date for the delayed task.
  - d. Regularly update the Gantt Project planner to reflect the current status of each task, including any delays and revised timelines.



## JDBC Class library design and documentation with a voice annotated MP4

PowerPoint document should be named: "Class Time - Group Number - Group JDBC Class Library.pptx"

- a. Demonstrate the effectiveness of meetings with an agenda and attendance.
  - i. Show the to-do list.
  - ii. Show the project plan.
- b. Explain how your design will be reusable for all the remaining projects for the semester.
- c. Show the documentation and a walkthrough of the group's effort in design and documentation.

Each member of the group will develop 20 problem statements (propositions) and develop the solution.

At a minimum, there should be one queries from each of the 5 different databases below:

1. use AdventureWorks20##;
2. use AdventureWorksDW20##;
3. use Northwinds2022TSQLV#;
4. use WideWorldImporters;
5. use WideWorldImportersDW

Problems should range from medium (13) to complex (7)

1. All queries must use the ANSI 92 standard for queries with the type safe "on" and will have relational output as well as a formatted JSON component.
  - a. Medium query should have from 2 to 3 tables joined and use built-in SQL functions and group by summarization. It should include combinations of subqueries or CTE or virtual tables.
  - b. Complex query should have from 3 or more tables joined, a custom scalar function, and use built-in SQL functions and group by summarization. It should include combinations of subqueries or CTE or virtual tables.

## Group presentation

### Identify the project leader for the group

Who are the designated project leader and their backup for delegating work?

### Standards

1. Ensure consistent look and feel for the entire project:
  - a. Learn how to use Heading 1, Heading 2, Heading 3, etc.
  - b. Utilize the Project Template to generate the Word table of contents based on the created headings.
  - c. Conduct peer reviews of each other's work.

### Create PowerPoint Presentation which is voice annotated

The presentation should:

1. Use the "Project one Specification latest date.pdf" word document to fully document each member's 20 queries. It is imperative to follow this format for submission.
2. Identify the work of each of the individual members in the to-do list.
3. PowerPoint document should be named "Class Time - Group Number – Group Project 1.pptx" and should:
  - a. Demonstrate the effectiveness of meetings with an agenda and attendance.
  - b. Show the to-do list:
    - I. If any of the members of the group do not participate, please document it in the to-do list. They will get a zero for the project.
    - II. Document who on the team will pick up the task(s) and who failed to do the work and note the reasons for the failure.
      - a. Show the project plan.
      - b. Show each query noted by the Student Name and their Question Number:
        - a) Each query must be formatted using PoorSQL.com or Redgate SQL Prompt format.
        - b) Have the proposition in the slide with the query.
        - c) Leverage as much as you can from the template of your query submission.
      - c. Summarize the team effort in the manner as you did individually.

4. Each team member will review their problems by **medium<sup>1</sup>**, and complex:
  - a. Prioritize their top 3 problems (medium, and complex); explain why they chose these problems for their top rating.
  - b. Prioritize their 3 worst problems (medium, and complex); explain why they chose these problems for their lowest rating. How can the problems be fixed to make them better?
  - c. Submit all of the queries in a SQL notebook in following format (Markdown and code cells):
    - i. Top 3 problems
    - ii. Worst 3 problems
    - iii. The remaining 14 problems
5. Review the team's problems by **medium<sup>2</sup>**, and complex:
  - a. Prioritize the top problems from all members and explain why the team made the decision for the rating. Identify the designed proposition and who wrote the query.
  - b. Prioritize the worst problems from all members and explain why the team made the decision for the rating. Identify the designed proposition and who wrote the query. How can the problem be fixed to make it better by the team?
6. Please keep the "Class Time - Group Number – Group Project 1.mp4" within a range of 20 to 30 minutes (note: Each team member must speak for 4 to 5 minutes, explaining their work).
7. Please keep the "Class Time - Group Number – JDBC Project 1.mp4" within a range of 12 to 20 minutes (note: Each team member must speak for 5 to 7 minutes, explaining their work).

### The submission should include the following:

1. Submission Format:
2. Provide a link to where your work is stored with organized directory structure or create a VHDX file with organized directory structure.
3. Folder Hierarchy:
  - a. Create a folder hierarchy for individual members' work and collaborative documents of the entire group.
4. Project Tracking Techniques Documentation:
  - a. Submit all project tracking techniques documentation.
5. PowerPoint Presentation:
  - a. Just like the homework submissions, walk a through the SQL Notebook explain your propositions and code execution in a voice-annotated MP4.
  - b. Name the PowerPoint document: Class Time - Group Number – Group JDBC Class Library.pptx.
  - c. Include a voice-annotated MP4 in the presentation.
  - d. Demonstrate the effectiveness of meetings with an agenda and attendance.

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<sup>1</sup> If you use ChatGPT, create two Markdown the before detail, in a separate Markdown the collaboration refinement. With the following note:



*Written in collaboration with ChatGPT from OpenAI to improve understanding and assist with the explanation of the query.*

<sup>2</sup> If you use ChatGPT, create two Markdown the before detail, in a separate Markdown the collaboration refinement. With the following note:



*Written in collaboration with ChatGPT from OpenAI to improve understanding and assist with the explanation of the query.*

- e. Show the to-do list.
  - f. Show the project plan.
6. Design Reusability:
  - a. Explain how your design will be reusable for all remaining projects throughout the semester.
7. Design and Documentation Walkthrough:
  - a. Show the documentation and conduct a walkthrough of the group's effort in design and documentation.
8. Individual Group Members' Problems Submission:
  - a. Submit individual group members' 20 problems using the template Microsoft Word document as a guideline to create your SQL notebooks of the problems by **medium**<sup>3</sup>, and complex
  - b. Create a PDF of the template as part of the submission.
  - c. Note the query group they belong to for this project in Header 1 (Top, worst and fixed Worst Queries).
  - d. Each submission should contain:
    - i. Three top queries from medium, and complex execution.
    - ii. Three worst queries from medium, and complex execution.
    - iii. Three worst queries from medium, and complex execution that were corrected to be considered top queries.
9. JDBC Class library or one of these **Top 10 MSSQL projects on Github** did you use
  1. JDBC Folder: Include all source, JAR files, and executables in a JDBC folder.
  2. **Top 10 MSSQL projects on Github did you use**
    - <https://github.com/Microsoft/mssql-jdbc>
    - <https://github.com/Microsoft/msphpsql>
    - <https://github.com/Microsoft/vscode>
    - <https://github.com/Microsoft/vscode-mssql>
    - <https://github.com/sqlcollaborative/dbatools>
    - <https://github.com/ErikEJ/SqlQueryStress>
    - <https://github.com/olahallengren/sql-server-maintenance-solution>
    - <https://github.com/Microsoft/SqlSupportTools>
    - <https://github.com/Microsoft/SqlSupportTools>
    - [https://github.com/anovick/sql\\_job\\_scripter](https://github.com/anovick/sql_job_scripter)
10. Additional PowerPoint Presentation:
  - a. Name the PowerPoint document: Class Time - Group Number – Group Project 1.pptx.
  - b. Demonstrate the effectiveness of meetings with an agenda and attendance.
  - c. Show a detailed to-do list.
  - d. Show the project plan.

<sup>3</sup> If you use ChatGPT, create two Markdown the before detail, in a separate Markdown the collaboration refinement. With the following note:



*Written in collaboration with ChatGPT from OpenAI to improve understanding and assist with the explanation of the query.*

Prepared by: Group Member Name

Date Prepared: 2/26/2024

Y:\Dropbox\CommisionerRoest\DatabaseClass-CSCI331\Projects\Project 1\Project one Specification 20240226.docx



11. Voice-Annotated PowerPoint Presentation:

- a. Create a voice-annotated PowerPoint document named Class Time - Group Number – Group Project 1.mp4.
- b. The presentation should have a minimum length of 20 to 35 minutes.

12. JDBC Execution Presentation:

- a. Create a voice annotation of the JDBC execution of the group's:
  - i. Three top queries from medium, and complex execution.
  - ii. Three worst queries from medium, and complex execution.
  - iii. Three worst queries from medium, and complex execution that were corrected to be considered top queries.
- b. Include each of the individual members' nine queries, totaling (number of members + 1) times 9 queries.
- c. Name the presentation: Class Time - Group Number – JDBC Project 1.mp4.
- d. The presentation should have a minimum length of 10 to 16 minutes.
- e. Use a Swing application for the presentation or an alternative GUI for the output.