University of British Columbia, Vancouver
Department of Computer Science

CPSC 304 Project Cover Page

Milestone #: ____3____

Date: ___2025.3.7_____

Group Number: _ 26_____

Name	Student Number	CS Alias (Userid)	Preferred E-mail Address
Astrid Zhang	49979776	d5c1m	zxyi0721@163.com
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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

Project Summary:

Our project focuses on developing a Pokemon data collection and game strategy management system using a relational database. The database models key aspects such as Pokemon species data, performance analysis, game mechanics, and team composition to help trainers optimize their gameplay. Users can store, retrieve, and analyze Pokemon attributes, evolution paths, and battle strategies, enhancing their decision-making in the game.

Timeline and Task Breakdown:

Week	Task	Description	Assigned Members
Week 1 (March 7 – March 13)	Database Schema Finalization	-Review Milestone 1 and 2 requirements to ensure schema meets project needs (seven relationships, seven entities, one ISA, one weak entity). - Implement necessary adjustments to the schema. - Populate each relation with at least five tuples.	- Astrid Zhang: Review relations and ensure normalization. - Zhaowei Cheng: Add constraints (e.g., foreign keys, UNIQUE constraints). - Astrid Zhang & Zhaowei Cheng: Populate each relation with data.
	SQL Script Creation	- Develop a single SQL script to initialize the database (DROP TABLE, CREATE TABLE, INSERT statements). - Test functionality in Oracle.	- Astrid Zhang: Write DROP TABLE and CREATE TABLE statements. - Zhaowei Cheng: Write INSERT statements for initial data population. - Astrid Zhang & Zhaowei Cheng: Test script execution.

Week 2 (March 14 – March 20)	Query Implementation (Non-Hardcoded Queries) with GUI Integration	- Implement INSERT, UPDATE, DELETE, Selection, Projection, Join queries.	- Astrid Zhang: Implement INSERT and UPDATE queries. - Zhaowei Cheng: Implement DELETE and Selection queries. - Astrid Zhang & Zhaowei Cheng: Implement Projection and Join queries.
	GUI Development	- Design and implement a user-friendly interface for executing non-hardcoded queries.	- Ruiyang Zhang: Create input forms for INSERT and UPDATE operations. - Ruiyang Zhang: Design dropdowns for Selection queries. - Ruiyang Zhang: Develop GUI elements for Projection and Join queries.
Week 3 (March 21 – March 27)	Query Implementation (Hardcoded Queries)	- Implement queries: 1. Aggregation with GROUP BY 2. Aggregation with HAVING 3. Nested Aggregation with GROUP BY 4. Division query	- Ruiyang Zhang: Implement GROUP BY and HAVING queries. - Ruiyang Zhang: Implement Nested Aggregation with GROUP BY query. - Ruiyang Zhang: Implement Division query.
	Error Handling and Security	- Implement error notifications for invalid inputs or failed operations. - Implement sanitization practices to prevent SQL injection attacks.	- Astrid Zhang: Handle errors for INSERT/UPDATE operations. - Zhaowei Cheng: Handle errors for DELETE/Selection operations. - Astrid Zhang & Zhaowei Cheng: Implement security measures (input sanitization).

Week 4 (March 28 – April 3)	Testing and Debugging	- Test all queries in the GUI to ensure correctness and usability. - Debug issues with query execution or data retrieval.	- Ruiyang Zhang: Test INSERT/UPDATE/DELETE queries in GUI. - Ruiyang Zhang: Test Selection/Projection/Join queries in GUI. - Ruiyang Zhang: Test Aggregation/Nested Aggregation/Division queries in GUI.
	Documentation Preparation	- Prepare a PDF report including: 1. Project description 2. Schema differences 3. SQL queries with file names and line numbers 4. Explanations of complex queries	- Astrid Zhang: Write schema differences section. - Astrid Zhang & Zhaowei Cheng: Document Queries 1-6. - Zhaowei Cheng: Document Queries 7-10.
Week 5 (April 4 – April 10)	Milestone 4 Submission	- Finalize all deliverables (SQL script, documentation) and submit them on Canvas.	- All team members contribute to finalization and submission.
Week 6 (April 11 – April 17)	Demo Preparation	- Prepare and rehearse for the Milestone 5 demo.	- All team members participate in demo preparation.
	Milestone 5 Demo	- Present the project to the TA during the scheduled demo slot.	- All team members present.
	Peer and Self-Evaluation	- Complete Milestone 6 Canvas quiz individually.	- All team members

If equal contribution is assumed:

Astrid Zhang: ~33%

Zhaowei Cheng: ~33%

Ruiyang Zhang: ~33%

If an uneven workload occurs, we will specify exact percentages in Milestone 6 evaluation.