**Team Project**

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**Part 1.**

Failure of Database Management Systems-Case Study

Each student can select his or her team that consists of four students.  A group of fewer than four students requires the instructor’s approval. Each team will use an instructor-approved topic relevant to the subject.

Students should research and write a paper about a failure of database system in a company. You should review the Case-Study and analyze it.

**Part 2.**

SQL database Design

Students are required to create a table for a company with optional data information about employee, manager, and department. The table must have different columns such as; first name, last name, email, phone number, hire date, job date, salary, and commission percentage.

The database design must include at least one of each of the following elements: foreign key, primary key, default and check constraints.  For example, you should consider one column as employee\_id, etc.

Each table must be populated with a minimum of 10 data rows.

The database must also include a stored procedure that allows a user to modify the data in one of the tables.

Students must answer the following questions:

1. Write a query to display the names (first\_name, last\_name) using alias name "First Name", "Last Name"
2. Write a query to get unique department ID from employee table.
3. Write a query to get all employee details from the employee table order by first name, descending.
4. Write a query to get the names (first\_name, last\_name), salary, PF of all the employees (PF is calculated as 12% of salary).
5. Write a query to get the employee ID, names (first\_name, last\_name), salary in ascending order of salary.
6. Write a query to get the total salaries payable to employees.
7. Write a query to get the maximum and minimum salary from employees’ table.
8. Write a query to get the average salary and number of employees in the employees’ table

The project proposal is due in Week 3, and must include a one-paragraph summary explaining the design of the database and the tables. The proposal must also include an entity relationship diagram (ERD) of the database.

The completed project is due at the end of the course, and must include the SQL code to implement the project requirements.

The paper must be no less than 6-7 pages. As in any scholarly writing, students should not merely copy information from another author. Students should use evidence to support the contentions they have drawn from their findings and critically analyze related literature. In essence, each paper needs to be an analytical paper, not a summary of readings.

In addition, a team presentation slide is required.

* The presentation consists of minimum 15 slides in addition of different slides for cover, agenda, key reference, and Q&A.

The following two resources are useful to improve your report:

* Plagiarism Checker - [Plagiarism Detector](https://plagiarismdetector.net/) (free) at <https://plagiarismdetector.net/>
* Grammar Checker - [Grammarly.com](https://app.grammarly.com/) (partially free) at <https://app.grammarly.com/>

**Team Project Proposal**

* **Proposal (1 page; 30 points) - Starting (Module 1) & Ending (Module 3)**

The team will provide a report formatted based on the provided template. Students are required to improve the writing iteratively and incrementally every week. The revision will always happen during a quarter. Students will add new required sections to the existing paper every week.

As provided in the template, the team project proposal report includes the title, authors information, a proposed abstract, keywords and three references.

[Team Project Proposal Template: TP01 T0X Author1 Author2 Author3.docx](https://mycourses.cityu.edu/d2l/lor/viewer/viewFile.d2lfile/14784/1088/TP01%20T0X%20Author1%20Author2%20Author3.docx)

**Proposal Contents**

1. Project Title
2. Team Information - Team member names, email addresses, and the team captain name
3. Project Summary – A short description of the project
4. Project Description - Describe clearly what you are trying to do in this project. What problem do you want to solve?
5. Usefulness - Describe how your project can be useful. Who will benefit from your project findings? Has this topic been studied before? How is your project differentiated from the previous ones?
6. Project tool – How you intend to use the tool (if any) to further your research.
7. Workload assignment - What each member has contributed for the proposal

**Team Project Progress Report**

* **Progress Report (3-4 pages; 70 points; graded after the proposal has been submitted) - Starting (Module 4) & Ending (Module 7)**

The team will provide a report formatted based on the provided template. Students are required to improve the writing iteratively and incrementally every week. The revision will always happen during a quarter. Students will add new required sections to the existing paper every week.

[Team Project Progress Report Template: TP02 T0X Author1 Author2 Author3.docx](https://mycourses.cityu.edu/d2l/lor/viewer/viewFile.d2lfile/14784/1089/TP02%20T0X%20Author1%20Author2%20Author3.docx)

**Progress Report Contents**  
Serves as a checkpoint before your final report, and the progress report. It should have the same layout as the final report. There could be some sections in progress, but introduction, literature review, and analysis methodology should be close to the final version.

1. Introduction
2. Literature Review
3. Methodology
4. Workload assignment - What each member has contributed for the progress report.

**Team Project Final Report**

* **Final Report (6-7 pages; 70 points; graded after the progress has been submitted) - Starting (Module 8) & Ending (Module 10)**

The final report is the culmination of applied research and activities conducted throughout the quarter. The final report/paper provides a detailed problem and its solution likely to be encountered by a company or organization described in a case study supplied by the student.

[Team Project Final Report Template: TP03 T0X Author1 Author2 Author3.docx](https://mycourses.cityu.edu/d2l/lor/viewer/viewFile.d2lfile/14784/1090/TP03%20T0X%20Author1%20Author2%20Author3.docx)

**Professional writing and Plagiarism:**

As in any scholarly writing, students should not merely copy information from another author. Students should use evidence to support the contentions they have drawn from their findings and critically analyze related literature. In essence, each paper needs to be an analytical paper, not a summary of readings.

Students are expected to use the assigned readings, videos, and other materials throughout the quarter. Students will need to utilize additional sources that were not assigned by the professor. While stylized after an industry report, nonetheless, students are expected to employ APA formatting of citations, footnotes, and bibliography. Students must cite the sources of all ideas, facts, and information used that are not their own, even if they have put the information into their own words. Failure to do so is plagiarism, although the oversight is unintentional. To avoid plagiarism, check <https://library.cityu.edu/howto/apa-writing/avoid-plagiarism/>.

**Final Report Contents**

1. Abstract
2. Introduction – What is the problem? Why is it important?
3. Literature Review – four papers or book chapters required per student
4. Methodology - description of your approach to addressing the problem
5. Results - finding the patterns or trends supported by visualizations
6. Conclusion – It should include lessons learned and the limitation of the paper.
7. References
8. Workload assignment - What each member has contributed for the final report and presentation slides.

**Team Project Final Presentation**

* **Final PPT (15+4 slides, 30 points; graded after the final report has been submitted) - Starting (Module 8) & Ending (Module 10)**

The student will report on the research outcomes, development, or other project efforts to an academically appropriate committee in a public forum. The nature of the presentation content will determine the specific makeup of the audience. The student will choose the format of the presentation, in consultation with the advisor. The layout and design must be appropriate and adequate to represent the outcomes of the effort. While students must make some form of a visual presentation, the presentation of the results may include publishing in a refereed publication, publication in a trade or popular magazine or journal, broadcast in an appropriate medium, or, in exceptional cases, limited dissemination within a closed community.

Each team will have 15 minutes for presentation and 5 minutes for questions and answers.  Each team must keep the total presentation time limit strictly.

[TP04 T0X Author1 Author2 Author3.pptx](https://mycourses.cityu.edu/d2l/lor/viewer/viewFile.d2lfile/14784/1091/TP04%20T0X%20Author1%20Author2%20Author3.pptx)