Database Applications Project Specifications

CCINFOM – Fundamentals of Database Systems AY 2025-2026

Developing a Database System requires the group to submit a project proposal for approval by Week 3 of the trimester. Approval of the proposal will span from Week 03 to Week 04 in preparation for the official start of the project development period from Week 09-12, although student groups are highly encouraged to make early preparations before Week 09-12 to avoid piling up requirements typical during Week 10-12. This document is a proposal guideline and not the project's full specification (expectations).

Deadline of Submission: **September 23, 2025, 9:00 PM**
Late Submissions will result in a deduction in the project grade of 5 points per day of late submission; a fraction of a day is considered a whole day.

Proposal Document: Created in Google Docs, Arial 10 in all texts, default
margin Document Sections: Section 1.0 Group Composition
Section 2.0 Why is this Database System important to be developed
Section 3.0 Records Management
Section 4.0 Transactions
Section 5.0 Reports to be Generated

Key components of the Database System Development project

1. Design of an appropriate and correct database to meet the records management and report requirements of the project
2. Design and develop the application in Java that correctly and completely implements the project's records management and report requirements.

Proposal Requirements

1. The proposal must have a background (one paragraph, maximum of 5 lines) that explains why this Database System is needed and that using Excel will not be enough to help users with their data requirements.

2. There should be four (4) records that should be managed in the Database System. Each record management must be assigned to a group member. Record management means adding a new record, updating an existing record, deleting an existing record, viewing a record, listing records (that can be filtered using a set of fields), and viewing a record & the related other records. In the proposal, the itemized data within each record will have to be enumerated.

   Example:

Product Record Management	(product code, product name, description, quantity in stock, discontinued)	assigned to group member 1
Customer Record Management	(customer number, last name, first name, first engagement date)	assigned to group member 2
Sales Representative Record Management	(sales rep number, last name, first name, branch code, quota, active)	assigned to group member 3
Branch Record Management	(branch code, branch name, address)	assigned to group member 4

   For "viewing a record & the related other records," examples could be
   - Viewing of a specific product record and the list of customers who bought the product
   - Viewing a customer record and the list of products they bought
   - Viewing a branch record and the list of active sales

   representative In the proposal, it should be indicated as:

Product Record Management	(product code, product name, description, quantity in stock, discontinued) Including viewing of a specific product record and the list of customers who bought the product	**assigned to group member 1**
Customer Record Management	(customer number, last name, first name, first engagement date) Including viewing a customer and the list of products they bought	**assigned to group member 2**
Branch Record Management	(branch code, branch name, address) Including viewing a branch record and the list of active sales representative	**assigned to group member 4**

3. There should be four (4) transactions that can be performed in the Database System. Transactions differ from records management because they combine data operations on several records.

   Example: Selling of Product as a Transaction will involve the following data, operations **assigned to group member 2**
   a. Reading the record of the customer buying to check if the customer is still allowed to buy products
   b. Reading the records of products that can be sold (e.g., products that are not yet zeroed in quantity)
   c. Recording the sales record with the total amount sold, the sales representative that facilitated the sales, among others
   d. Recording the products sold in the sale with the quantity sold and price given
   e. Updating the product record to deduct the quantity sold

   In the proposal, the itemized operations within the transaction will have to be enumerated, and the group member assigned to develop the transaction.

4. Four (4) reports should be generated, combining and aggregating data from at least two records. Each report must be assigned to each group member. Imperatively, reports always have a time dimension (e.g., Report per Month and Year, Report per Year, Report per Day) that will be asked from the user before the report is generated. Reports are different from listings. Data for listing are operating on records managed, and data for Reports are extracted from transactions.

   Example: Sales Report (total and average sales amount) per day, for a given Year and Month, **assigned to group member 3**
   Customer Engagement (number and total amount of sales transactions) Report per customer for a given Year and Month, **assigned to group member 4**

Submission of DB Application Project

In submitting the DB Application Project, a ZIP File (filename as CCINFOM Section-GROUP NUMBER-DBAPP.zip) containing the following must be submitted in Canvas

1. SQL Script to create the Database used in the project with sample Data (.SQL). Use the filename as – CCINFOM Section-GROUP NUMBER-DBAPPSCRIPT.sql
2. Application Folder of the DB should use the project name as – CCINFOM Section-GROUP NUMBER-DBAPP

Not following any of the submission requirement rules constitute a -5 in the project grade per rule violation

Rubric for Assessment of the Project

	4.0	3.0	2.0	1.0	0.0
Core Data Module	Additional functionalities were added to all the record management functionalities to improve the reliability and ease of use of the Core Data Records	All the record management functionalities were completely and correctly implemented	Only 4 out of the 5 record management functionalities were completely and correctly implemented	Only 3 out of the 5 record management functionalities were completely and correctly implemented	Less than 3 record management functionalities were completely and correctly implemented
Report or Transactional Module	Additional functionalities were added improve the reliability and ease of performing transactions or report generation	All the basic functionalities for transaction or report generation were completely and correctly implemented	Only 75% of the basic functionalities for transaction or report generation were completely and correctly implemented	Only 50% of the basic functionalities for transaction or report generation were completely and correctly implemented	Less than 50% of the basic functionalities for transaction or report generation were completely and correctly implemented
DB System Concept	Able to use concepts to convincingly and clearly explain and decide on the design and implementation of the database and functionalities to improve user data activities using DB Application	Able convincingly and clearly explain and decide on the design and implementation of the database and functionalities to improve user data activities using DB Application, but not consistently with sound concepts	Explanations to the decisions made on the design and implementation of the database and functionalities shows limited understanding of the role of Database Systems to support user data activities	Explanations to the decisions made on the design and implementation of the database and functionalities shows selective and limited understanding of the role of Database Systems to support user data activities	Explanations to the decisions made on the design and implementation of the database and functionalities shows lack of understanding of the role of Database Systems to support user data activities