Developing a Database Application (DB App) requires the group to submit a project proposal for approval by Week 4 of the trimester. Approval of the proposal will span from Week 4 to Week 5 in preparation for the official start of the project development period from Weeks 8-12, although student groups are highly encouraged to make early preparations before Week 8 to avoid piling up requirements typical during Weeks 10-12.

Deadline of Proposal Submission: September 23, 2025 (T), 2100

- *Proposal to be submitted by sending the link to the Google Docs file. Ensure that the faculty has Edit Access to the Google Docs file.*
- *Late submissions will be marked as Incomplete (0 points). Late provision of Edit Access to the Google Docs file to the faculty is considered late submission of the proposal (incomplete).*
- *Non-submission will result in a grade of 0 in the DB App Project.*

Key Components of the DB App 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
3. Population of the database tables with a minimum of at least 10 records each, sufficient enough to demonstrate how transactions are executed and reports generated
4. Integration of all components into a single DB App, following a 3-tier system architecture

Proposal Document Contents

Created in Google Docs, Arial 10 pts. in all texts, default margin (1 inch on all sides), containing the following sections:

- Section 1.0 Group Composition
- Section 2.0 Rationale for DB App Development
- Section 3.0 Records Management
- Section 4.0 Transactions
- Section 5.0 Reports to be Generated

Proposal Requirements

1. List the names of the group members in alphabetical order, with the format Lastname, Firstname MI.
2. The proposal must have a background (one paragraph, maximum of 5 lines) that explains why the proposed DB App is needed and that using Excel will not be enough to help users with their data requirements.
3. There should be at least two (2) core record tables that should be managed in the Database System. Each group member should be assigned at least one (1) core record table with its corresponding set of record management functions. 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 other related records. In the proposal, the itemized data within each record will have to be enumerated, as shown in the example below:

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*

** Indicate the name of the group member assigned*

Each of the core record tables above has its own set of record management functions (ie. add, update, delete, view, list, and view with other related records for Product Record Management, separate from that of the Customer, Sales Representative, and Branch tables).

Also list the specific outputs for "viewing a record & the other related records". Here are some examples:

- 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) Viewing a Record with Other Related Records: 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) Viewing a Record with Other Related Records: Viewing a customer and the list of products they bought	assigned to group member 2*
Branch Record Management	(branch code, branch name, address) Viewing a Record with Other Related Records: Viewing a branch record and the list of active sales representative	assigned to group member 4*

** Indicate the name of the group member assigned*

4. There should be at least two (2) transactions that can be performed in the Database System. Each group member should have at least one (1) transaction to develop. Transactions differ from records management because they combine data operations on several records. In the proposal, the operations within the transaction will have to be enumerated, and the group member assigned to develop the transaction, as shown in the following example:

   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

   ** Indicate the name of the group member assigned*

   Performing transactions will require the development of additional tables aside from the core ones specified in records management. Identification of transaction tables is not yet required in the DB App proposal to be submitted.

   Reminder: Ensure that you have the necessary core records to be able to perform the proposed transactions.

5. At least two (2) reports should be generated, combining and aggregating data from at least two records. At least one (1) report must be assigned to each group member. Imperatively, reports should 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 through input via the user interface (e.g. drop-down list or calendar form control). 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 Report	(number and total amount of sales transactions) per customer for a given Year and Month	assigned to group member 4*

   ** Indicate the name of the group member assigned*

   Reminder: Ensure that you have the necessary data to be able to produce the proposed reports.