

Database Systems (Spring- 2024) Semester Project

Due Date: 03 May , 2024

Total Marks : 300

Project Domain:

Each group (**2 members**) has to choose one topic from the given topics for the project.

Project Deliverables

1. Project scope Document (PDF)
2. Project Report (PDF)
3. Project Implementation (Zip file)
4. Project Demo + Project Viva (Complete working DB application including back end and front end)

Below are the details of project deliverables one by one.

1- Project scope Document (1-2 Pages) Deadline April 22, 2024

Project Description

Introduction to your project domain/area (1 Paragraph or in bullets; 4-7 Lines)

Problem Statement

Briefly explain the problem statement i.e., why you are developing this system. (1 Paragraph or in bullets; 4-7 Lines)

Problem Solution

Briefly explain the solution which you are providing. (1 Paragraph or in bullets; 4-7 Lines)

Advantages/Benefits of proposed system

Write down the advantages and benefits of the system you are developing. (1 Paragraph or in bullets; 4-7 Lines)

Scope/List of features

Write down the scope of your project which must include

- o Users (atleast 3 different type of users)
- o Modules of the project
- o Functional Requirement/Features for every user

Planning Approach

Write down your project planning approach. How did you gather your requirements? Mention the technique used for gathering your requirements like interview, questionnaires, observation or record review etc. (1 Paragraph or in bullets; 8-10 Lines)

2- Project Report – Contents (PDF) Deadline May 03, 2024

- Table of Contents – (list of Section with their page numbers) (1-2 Page)
- Detailed Functional Requirements of each module (3-5 Page)
- ERD (As per standards and use Some Software Tool like rational rose, ms visio etc.) (1 - 2 Page)
- EERD (As per standards and use Some Software Tool like rational rose, ms visio etc.) (1 - 2 Page)
- Relational Schema/Logical Schema with Normalization: Verify that all relations in relational db schema are in 3NF, if not then convert into 3NF.
- User Documentation and Help – usage guidelines (2 -3 Page)
- Screen Shots OF implemented Project (5-7 Page)

3- Project Implementation in Commercial Database (SQL Server as Database) Deadline May 03, 2024

How to make Database basic steps

- Requirements: requirement Gathering and analysis
- Requirements: Finalizing the requirement and documenting them
- DB Design: Creating ERD and EERD on paper first and after finalization on Software Tool.
- Normalization: Applying normalization at schema level, until 3rd Normal Form
- Implementation: Table creation with SQL queries, considering proper table names, structure, attributes names, data types etc.
- Implementation: Assigning Relationships using Keys. (By SQL queries)
- Implementation: Adding some data and then Checking Data validation.
- Security: Applying data security mechanisms
- Front End Interface: Show At least 5 CRUD operation.
- Implement SQL Queries (Must be done in your project)
- At least 20 Multi-table Queries related to your project.
- At least five different Views related to your project.

4- Project Demo + Project Viva – Date will be given by instructors

Present Project Demo on the established environment. A viva will be taken from project with practical aspects and questions.

Project Scope Document and Report Format:

- The project report shall be computer typed (English- British, Font -Times Roman, Size- 12 point) and printed on A4 size paper.

TOPICS FOR THE PROJECT

- Thesis Management System
- TA & Demonstrator Management System
- Cafe Management System
- Conference Management System
- Fast Day Care Management System

NOTE : To develop the above mentioned systems effectively, students are required to actively engage in gathering information from the relevant personnel on how the system currently operates and understand the workflows in place.

Submission Instructions:

- All submissions MUST be uploaded on Google Classroom. **Solutions** This is a group project. Group of 2 members is allowed.
- **sent to the emails will not be graded.** To avoid last minute problems (unavailability of Google Classroom, load shedding, network down etc.), you are strongly advised to start working on the project from day one.
- Combine all your work in one zip file named ROLLNO1_ROLLNO2_Project(e.g.,20i-1234_20i-0304_Project.zip).
- Submit the .zip file on the classroom within a given deadline.
- Failure to submit according to the above format would result in **ZERO** marks.

Plagiarism: **ZERO marks** will be awarded if any significant part of assignment is found **plagiarized**.