



**Independent University, Bangladesh**  
**Department of Computer Science & Engineering**  
**CSC 401: Database Management**  
**Project Outline**

**Introduction:**

In this course, CSC401 Database Management System you have been provided with a real world problem related to automation of manual business process using information system. In this case study you can apply the knowledge you are gaining from this course. For this reason you have to understand the total business processes and identify the existing business problems. After analysis the problem you have to choose a suitable solution and proposed the with respect to the constraints. Please talk to the instructor/SoD in case you have any problem while working with your project.

**Your tasks:**

Plan for the project is given below:

Task	Outcome
Find a company (real world problem), approach the management, learn the business processes, analysis the processes and share your idea to motivate the management to accept automated IS.	<b>Report 1: Chapter 1 and chapter 3.</b> 15 <sup>th</sup> February
Logical System Design in the next phase of the project. In this phase you have to draw the Entity Relationship diagram based on your proposed solution. And need to transform the ERD to Relations. You have to normalize the relational model up to BCNF with appropriate description. Finally, you have to prepare data dictionary for the system.	<b>Report 2:</b> chapter 4
Physical System design is divided into two phases, i. Database design and ii. Front end (GUI) design. In case of database design you have to prepare all DDL, DML statements. On the other hand for GUI you have design the forms and reports. You need to describe the purpose and methods along with required SQL and challenges. Architectural design issues must be addressed here. Finally, you need to discuss the problems along with the solutions arise during development phases.	<b>Report 3:</b> Chapter 5.
Complete Project: you have to make a project that works without error. Demonstrate the project and submit the report after making required changed based on the suggestion of the faculty.	<b>1. Final Report</b> <b>2. Final Project.</b> 17 <sup>th</sup> April

Final report is the combination of all the tasks that you have done so far. The guideline for the report is given below:

**Cover Page, approval page, originality statement and acknowledgement as per template.**

**Table of contents** (Should be Automated, Should include list of Tables and List of figures)

**Ch-1 Introduction**

- Background of the Project
- Background of the Organization
- Objectives of the Project
- Scope of the Project

**Ch-2 Methodology**

- Design system
  - Process Diagram (BPMN 2.0)
  - Entity relationship diagram (ERD)
  - Normalization
- Programming methodology
- Logical and Physical Design

**Ch-3: Requirement Analysis**

- Existing Business System (with rich picture)
- Process Diagram (As Is)
- Processes along with six system elements.
- Existing Problems & Analysis of the problem

- Proposed Business System (with rich picture)
- Process Diagram (to be)
- Proposed processes along with six system elements.

#### **Ch-4 Logical System Design**

- Business Rules
- ERD
- ERD to Relations
- Normalization
- Data Dictionary

#### **Ch-5 Physical System Design**

- Database Schema diagram
- DDL Statements
- Input Forms
  - Purpose
  - Controls and flow of controls
  - Related SQL Used
- Output Query & Reports
  - Purpose
  - Controls and flow of controls (in case of customizable report)
  - Design analysis & description along with SQL

#### **Ch-6 Problem & Solution**

(Write down the problems you have experienced while working in this project and how you have solved those problems. In case of any unsolved issues include some ideas to overcome those problems.)

#### **Ch-7 Conclusion**

- **Additional feature & Future Development** (This section deals with the additional nonfunctional requirement of the system. i.e., the extra features of the software should be provided in this section.)
- Conclusion & Recommendations

**Reference:** reference number should be provided in third bracket ([ ]) in the text and in this section the details of the reference should be given using the following style.)

For book: *Author L Name, Author F Name, Book name, Publisher name, Edition, publishing Year*

For Internet: *Site Name, URL Address, Last Visited Date*

**Appendix** (To reduce the size of the main report an extension of the report is given in this area. The main report should refer to this area. The part that is so important that you can't exclude it from the report neither can include in the main part is normally placed in this section.)

#### **Formatting convention of the report:**

1. Headings: Times new roman or Arial 24 to 14 size, Bold, Shadow, All Cap, 12 point before paragraph and 3 point after paragraph.
2. Body Text: Times new roman 12 or Arial 10, justified, normal, 1.5 spacing and 6 point after paragraph.
3. Page Setup: Size: A4, Top 1", Bottom 1", Left 1.25" and Right 1".
4. Page number should be in the footer in the middle.
5. Project name should be on the header (left side) along with student Name and ID (right side).

#### **What to Do and what Not to do?**

1. Each student should submit the reports individually although they are working in a group. The final report can be a group report. With the final report student should mention their role in the report clearly.
2. Should submit the Hard copy and softcopy of your report.
3. Final hardcopy should be spiral bind.
4. Should fix the presentation time and viva with the instructor.
5. Should make a presentation in Power point on the Report.
6. For the Viva you have to prove that you have done the program by yourself. In case you fail to proof so, you will get zero in the project, report and presentation.
7. If you are weak in programming then just do the physical design part to get the pass mark in the course.

**Good Luck**