

**NATIONAL UNIVERSITY OF COMPUTER & EMERGING SCIENCES**  
**ISLAMABAD CAMPUS**  
**DATABASE SYSTEMS LAB (CL 2005) – SPRING 2023**  
**PROJECT**

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**Due Date: May 21, 2023 (11:59 PM)**

**Instructions:**

1. This is a group project having a group size of 2 to 3 members.
2. Cross-section groups are **NOT** allowed in any case.
3. Draw ER/EER diagrams on any tool like Lucid Chart or Draw.io etc.
4. Submit a single zip file containing all SQL files, pdf file of your report and the complete C# project (.sln file). **Make sure that the screenshots in the report are legible.**
5. Your submission must be a single zip file. No rar or any other format is allowed. The file must be renamed with the roll numbers of your group members section. For example, if your group member's roll numbers are 21i-1234, 21i-1235, 21i-1236 and your section is P, so, the file must be named as 21i-1234, 21i-1235, and 21i-1236\_P.
6. **Plagiarism in the project will lead to ZERO marks in the project with referring the case to the Disciplinary Committee.**
7. All submissions must be done on Google Classroom. Any submission outside Google Classroom will not be entertained, whatever the reason is.
8. If you have made any assumptions clearly mention that in the pdf document of your report.
9. **Failing to follow any of the above instruction will result in ZERO marks in the assignment.**

## **GOOGLE CLASSROOM**

In this project your task is to implement Google classroom. Google Classroom is an online platform developed by Google for schools, colleges, and other educational institutions to manage and streamline the process of teaching and learning. It enables teachers to create, distribute, and grade assignments, as well as communicate with students, all within a secure online environment.

The portal opens with a Signup/login form. This form divides the portal into two major panels depending on the role selected by the user. The two major panels of the portal are:

- Student Panel
- Teacher Panel

### **Teacher Panel:**

When this panel is opened, it shows all the active classes created by that teacher. The functional requirements of this panel are listed below:

- Teachers should be able to manage (create, update, delete) classes. While creating a class, teacher can set a unique classroom code of every class.
- Teachers should be able to manage announcements.
- Teachers should be able to manage assignments.
- Teachers should be able to manage class materials.
- Teachers should be able to set deadlines for assignments, and view students' progress (no. of assignments submitted) on assignments.
- Teachers should be able to grade the assignments submitted by the students.
- Teachers should be able to manage comments.
- Teacher should be able to generate report of the total students enrolled in a class and should also be able to generate report about the grades of the assignment.

### **Student Panel:**

When this panel is opened, it shows all the active classes in which the student is enrolled. The functional requirements of this panel are listed below:

- Students should be able to enroll in the classes using the unique classroom code.
- Students should be able to submit the assignments.
- Students should be able to manage their own comments on the announcements/assignments posted by the teacher.

## **TASKS**

- Draw ERD/EERD of the Google Classroom portal using any online tool.
- Convert ERD/EERD to relational schema using SQL Server Management Studio.
- Make relevant forms of the portal as described in the above description in C#.
- Generate reports as described in the case in C#.
- Write a detailed report of the project. The report must highlight the goals of the project, your approach to solve the problem, your ERD/EERD and the screenshots of the reports generated. The report must also highlight what have you learnt from this project and how this project can be improved with a brief conclusion of the content discussed in the report.

## **MARKING CRITERIA**

Task	Marks
ERD/EERD	15
ERD to Schema Mapping	10
Manage Classes	20
Manage Announcements	20
Manage Assignments	20
Manage Materials	15
Set deadlines	10
View student's progress	15
Grade assignments	10
Manage comments	20
Report of Students	20
Report of Assignments	25
Enroll in class	20
Submit assignments	15
Manage own comments	15
GUI Design	30
Report	20
<b>Total</b>	<b>300</b>

**Good Luck** 😊