## Department of Computer Science and Engineering Khulna University of Engineering & Technology



## CSE 3110 Database Systems Laboratory

### DATABASE MANAGEMENT FOR A HALL

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#### **Submitted To:**

Dr. K. M. Azharul Hasan
Professor
Mehnuma Tabassum Omar
Lecturer
Department of CSE
KUET, Khulna.

#### **Submitted By:**

1207013 NABIL SARWAR RAHAT

Undergraduate (Engineering) Students of 3<sup>rd</sup> year 1<sup>st</sup> Term Department of Computer Science and Engineering Khulna University of Engineering & Technology Bangladesh

### PROJECT DESCRIPTION

There are approximately 350 students lives in lalon shah Hall .In Lalon shah hall there are 45 room including the room for the HONOURABLE PROVOST. Each room has a definite number of fans, tables, and in every room there are certain number of students. Every students who lives in this hall their own personal information including their home district detailed Address. There are students from various depertment lives

In this hall.Including students to maintain the hall certain number of workers including dinning boy who maintain the dinning for the sutdents also live here. There have seperate rooms for them. They get their salary according to their level of work. Every month cultural festival occurs by thr participation of the students of the hall. In lalon shah hall the students are very active in all kind of cultural festival so they are famous all around the university. Each and every students has their own cultural test. They participate in the cultural festival according to their interest. The difference in lalon shah hall is that they also arrange sports along with the cultural activities. Sports include outdoor and indoor games.

	ROOM			STUDENT			
PK	RC	OOM_NO	P	K		STUDENT_ID	
	FL	FLOOR		K	ROOM_ID		
					FNAME		
	FAN_NUMBER			LNAME			
	TA			MOBILE STREET			
	STUDENT_NUMBER						
				CITY		CITY	
					ZIP		
				CGPA DEPT			
					BIRTH_DATE		
	DinningBoy				ACTIVITY		
	Din	ningBoy				ACTIVITY	
	Din PK	ningBoy DINNING_BOY_ID			PK	ACTIVITY  HALL_ID	
					PK PK	1	
	PK	DINNING_BOY_ID				HALL_ID	
	PK	DINNING_BOY_ID  ROOM_LIVE_ID			PK	HALL_ID CULTURAL	

## DESIGN OF THE PROJECT

In the design part we can extract 4 tables from our description. They can be named as:

### TABLES:

ROOM: in which some description of room will be in the table. Say number of fans, tables, students etc.

STUDENT:Personal information of each student including their cgpa,id,name,address,mobile number etc

ACTIVITY: The different cultural and sport activity of each student including their hall id.

DinningBoy:Description of their work, salary, id.

# Relationships:

From this tables we can set one to many relationship between ROOM and STUDENT table for that the PRIMARY KEY (ROOM\_NO) in the ROOM table

Will be used as the foreign key in the STUDENT table. We can set a one to many relationship between STUDENT and ACTIVITY table so in this case the primary key STUDENT\_ID Will be used as the foreign key in the ACTIVITY table.

Another relation which can be set up between DinningBoy and ROOM a one to many relationship between ROOM AND DinningBoy table, so ROOM NO will be the foreign key of the DinningBoy table.

# IMPLEMENTATION OF THE PROJECT

- In ORACLE we have created our database the language we used is SQL.
- The whole work will be done on command line the code will be written in NOTEPAD.
- At first 4 table are created.
- Using ALTER command columns are added and also removed.
- Appropriate values are inserted in each table in accordance with declaration of the PRIMARY AND FOREIGN key.
- Values are updated, deleted using appropriate command.
- Values in a table can be arranged accordance with any row which is implemented with the help of order by, group by command.
- Use of aggregate function along with the select statement is also shown in the project.
- The result of two SQL statement is sometime needed to be summed or substracted we used in this case INTERSECT, MINUS, UNION ALL COMMAND
- For getting data from a condition from two table at once JOIN command is used. For various purpose LEFT OUTER JOIN ,RIGHT OUTER JOIN ,FULL OUTER JOIN ,EQUI JOIN is used.
- One of the powerful feature of this database language is using PL/SQL we can write anonymus blocks of code like we programin C language we can declare variable, there are also executable section we can write there various condition and print our desired output.
- Procedure, function is used for printing desired output or returning value from the database.