



National University of Computer and Emerging Sciences



In Lab 2

“DDL and DML”

Database Systems

Course Instructor	
Lab Instructor (s)	
Section	
Semester	

Department of Computer Science
FAST-NU, Lahore, Pakistan

Exercise

**Task-I**

Execute LabEx-0.sql and observe the errors encountered during execution. Write down the reasons of these errors.

Task-II

Create a database schema that contains following tables.

Student:

RollNum	Name	Gender	Phone
L164123	Ali Ahmad	Male	0333-3333333
L164124	Rafia Ahmed	Female	0333-3456789
L164125	Basit Junaid	Male	0345-3243567

Attendance:

RollNum	Date	Status	ClassVenue
L164123	2-22-2016	P	2
L164124	2-23-2016	A	1
L164125	3-4-2016	P	2

ClassVenue:

ID	Building	RoomNum	TeacherId
1	CS	2	1
2	Civil	7	2

Teacher:

Id	Name	Designation	Department
1	Sarim Baig	Assistant Prof.	Computer Science
2	Bismillah Jan	Lecturer	Civil Eng.
3	Kashif zafar	Professor	Electrical Eng.



Task-III

Q1: After creating all the tables, add all the rows as shown above. (format for date **mm-dd-yy** e.g, '02-22-2017')

Q2: Identify one PK from each table and add the constraint.

Q3: Identify all the FK constraints, and add those constraints, such that:

- a) If the Student table or ClassVenue Table or Teacher table is updated the referencing columns should also reflect the changes.
- b) Student should not be deleted if the details of his Attendance are present.

Q4: Alter table Student by adding new column "warning count".

Q5: Perform the following DML actions on your database, identify whether these operations are **valid or not**, also state how can we make the invalid queries valid? (Your answers should be written in comments along with your queries).

- i. Add new row into Student table, values <L162334, Fozan Shahid, Male, 3.2 >
- ii. Add new row into ClassVenue table, values <3, CS, 5, Ali>
- iii. Update Teacher table Change "Kashif zafar" name to "Dr. Kashif Zafar".
- iv. Delete Student with rollnum
"L162334"
- v. Delete Student with rollnum
"L164123"
- vi. Delete Attendance with rollnum
"L164124", if his status is absent.

Q6:

- i. Alter table and Add CNIC in student table.
- ii. Alter table and drop phone column from student table.



- iii. Alter table and add unique constraint on teacher name.
- iv. Alter Student table and allow values only Female and Male for gender.
- v. Alter Attendance table and allow A and P as status values only.