

**National University of Computer and Emerging Sciences**



# In Lab

“Introduction to MS SQL Server, DML and DDL”

Database Systems Lab

Spring 2023

Department of Computer Science  
FAST-NU, Lahore, Pakistan



## Exercise

Create a database and schema that contain 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	Teacher
1	CS	2	Sarim Baig
2	Civil	7	Bismillah Jan

### Teacher:

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



**Q1:** create all the tables and add all the rows. (format for date **mm-dd-yy** e.g, '02-22-2017')

**Q2:** Identify one PK from each table and add the constraints using alter.

**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 that order is present.

**Q4:** Alter table Student by adding new column "**warning count**" and deleting "**Phone**" Column

**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 teacher and add unique constraint on column "**Name**".
- ii. Alter Student table and Check Female and Male gender.
- iii. Alter Attendance table and check A and P status.