



**Department of Computer Science and Engineering**  
**Islamic University of Technology (IUT)**  
A subsidiary organ of OIC

**Lab Report 1**

**CSE 4508 : RDBMS**

**Name:A N M Zahid Hossain**

**Student ID:200041202**

**Section:2B**

**Semester:5**

**Academic Year:2022-23**

**Date of Submission:12.8.2023(12:20 AM)**

## **Title:** Recap on last DBMS(CSE4307) course

### SQL COMMANDS:

Give all primary key and foreign key constraints accordingly. SchoolName and ClassName should be unique and it should be a required field.

Use Check Constraint so that Grade and TotalGrade fields are within 2.0 to 4.0.

Use Check Constraint so that email contains “@gmail.com” in the end.

Use Default Constraint so that Address is “IUT, BoardBazar, Gazipur, Bangladesh” by default.

Use Auto increment for StudentId which should start from 200041101.

```
#####
```

```
create table school(
```

```
    school_id int primary key,  
    schoolname varchar2(255) not null,  
    description varchar2(255),  
    Address varchar2(255),  
    phone varchar2(255),  
    postcode varchar2(255),  
    postaddress varchar2(255) ,  
    unique(schoolname)
```

```
);
```

```
INSERT INTO school values(101,'cza','best place in earth','cumilla','0123','3507','kandirpar');
```

```
INSERT INTO school values(102,'bzs','not the best place in earth','barisal','0123','3507','kandirpar');
```

```
INSERT INTO school values(103,'rzs','not the best place in earth','rangpur','0123','3507','kandirpar');
```

```
#####
```

```
create table class(
```

```
    class_id int not null,  
    school_id int not null,  
    ClassName varchar2(50),  
    description varchar2(255),  
    primary key(class_id),  
    FOREIGN KEY (school_id) REFERENCES school(school_id),
```

```

        unique(ClassName)
    );
INSERT INTO class values(1001,101,'six','abcd');
INSERT INTO class values(1002,102,'seven','abcd');
INSERT INTO class values(1003,103,'nine','abcd');

#####

create table teacher(
    teacher_id int not null,
    school_id int ,
    teacher_name varchar2(50),
    description varchar2(255),
    primary key(teacher_id),
    FOREIGN KEY (school_id) REFERENCES school(school_id)
);
INSERT INTO teacher values(11,101,'eren yeger','abc');
INSERT INTO teacher values(12,101,'mikasa ackerman','abc');
INSERT INTO teacher values(13,101,'yagami','abc');

```

```

#####

create table course(
    course_id int not null,
    school_id int not null,
    course_name varchar2(50),
    description varchar2(255),
    primary key(course_id),
    FOREIGN KEY (school_id) REFERENCES school(school_id)
);
INSERT INTO course values(4501,101,'OS','abc');
INSERT INTO course values(4503,101,'MicroP','abc');
INSERT INTO course values(4508,101,'RDBMS','abc');

```

```

#####

create table course_teacher(
    teacher_id int ,
    course_id int ,
    primary key(teacher_id,course_id),
    FOREIGN KEY(teacher_id) REFERENCES teacher(teacher_id),
    foreign key(course_id) REFERENCES course(course_id)
);
INSERT INTO course_teacher values(11,4501);

```

```
INSERT INTO course_teacher values(12,4503);
INSERT INTO course_teacher values(13,4503);
```

```
#####
```

```
#####
```

```
CREATE TABLE student (
    student_id INT PRIMARY KEY,
    class_id INT NOT NULL,
    student_name VARCHAR(255) NOT NULL,
    student_number INT,
    TotalGrade DECIMAL(4, 2) CHECK (TotalGrade >= 2.0 AND TotalGrade <= 4.0),
    address VARCHAR(255) DEFAULT 'IUT',
    phone VARCHAR2(15),
    email VARCHAR(255) CHECK (email LIKE '%@gmail.com'),
    FOREIGN KEY (class_id) REFERENCES class (class_id)
);
```

```
INSERT INTO student(class_id,student_name, student_number, TotalGrade, address, phone, email)
VALUES (1001,'Jane Smith', 1, 3.95, '456 Elm St', '5555678', 'jane.smith@gmail.com');
```

```
INSERT INTO student(class_id,student_name, student_number, TotalGrade, phone, email)
VALUES (1001,'Joe rogan', 1, 3.95, '5555678', 'jane.smith@gmail.com');
```

```
INSERT INTO student(class_id,student_name, student_number, TotalGrade, phone, email)
VALUES (1001,'Captain Levi', 1, 4.00, '666678', 'leviAckerman@gmail.com');
```

```
#####
```

```
#####
```

```
create table student_course(
    student_id int not null,
    course_id int not null,
    FOREIGN key(student_id) REFERENCES student(student_id) on delete cascade,
    FOREIGN key(course_id) REFERENCES course(course_id) on delete cascade
);
```

#####

```
CREATE SEQUENCE student_id_sequence
  START WITH 2041101
  INCREMENT BY 1
  NOMAXVALUE
  NOCACHE;
```

####

```
create table std(
  std_id int primary key,
  name varchar2(10)
)
CREATE OR REPLACE TRIGGER set_student_id_trigger
BEFORE INSERT ON student
FOR EACH ROW
DECLARE
  v_query_result NUMBER;
BEGIN
```

```
  SELECT student_id_sequence.NEXTVAL INTO v_query_result FROM dual;
  :NEW.student_id := v_query_result;
END;
```

/

#####

```
create table grade(
  student_id int not null,
  course_id int not null,
  grade NUMBER,
  FOREIGN key(student_id) REFERENCES student(student_id),
  foreign key(course_id) REFERENCES course(course_id)
);
```

```
insert into grade values(2041104,4501,4);
insert into grade values(2041104,4501,4);
insert into grade values(2041104,4501,4);
```

```
Run SQL Command Line
-----
POSTADDRESS
-----
101
czs
best place in earth
cumilla
0123
3507
kandirpar

102
bzs
not the best place in earth
barisal
0123
3507
kandirpar

103
rzs
not the best place in earth
rangpur
0123
3507
kandirpar

SQL>
```

```
Run SQL Command Line
-----
1001      101 six
abcd
1002      102 seven
abcd
1003      103 nine
abcd

SQL> select *from teacher;
TEACHER_ID SCHOOL_ID TEACHER_NAME
-----
DESCRIPTION
-----
11      101 eren yeger
abc
12      101 mikasa ackerman
abc
13      101 yagami
abc

SQL>
```

```
Run SQL Command Line
-----
abcd 1001 101 six
abcd 1002 102 seven
abcd 1003 103 nine

SQL> select *from teacher;
TEACHER_ID SCHOOL_ID TEACHER_NAME
-----
DESCRIPTION
-----
abc 11 101 eren yeger
abc 12 101 mikasa ackerman
abc 13 101 yagami

SQL> |
```

```
Connected.
SQL> select *from grade;

STUDENT_ID COURSE_ID GRADE
-----
2041104 4501 4
2041104 4503 4
2041104 4508 4

SQL> |
```

```
SQL> select *from student_course;

no rows selected

SQL> insert into student_course values(2041104,4501);

1 row created.

SQL> insert into student_course values(2041104,4503);

1 row created.

SQL> select *from student_course;

STUDENT_ID  COURSE_ID
-----
2041104      4501
2041104      4503

SQL>
```

AT SOME QUERY RESULTS I CAN'T ORGANIZE THE CMD PROMT.I APOLOGIZE FOR THAT.I HOPE YOU'LL BE KIND ENOUGH TO UNDERSTAND THAT