



**Princess Sumaya University for Technology  
King Hussein Faculty of Computing Sciences  
Computer Science Department**

**Database Systems Lab  
CS 11354  
Lab Assignment # 7  
Semester: Spring 2022/2023**

**Lab Exercises:**

1. Create a table named **Sections** with the following rules and constraints:

Column name	Section_ID	Section_name	Number_of_instructors
Data type	Number	Varchar2	Number
length	3	30	2
constraints	Primary key		Default: 0 Must be positive

```
CREATE TABLE Sections (  
    Section_ID NUMBER(3) CONSTRAINT section_id_pk PRIMARY  
    KEY,  
    Section_name VARCHAR2(30),  
    Number_of_instructors NUMBER(2) DEFAULT 0 CONSTRAINT  
    positive_num_ck CHECK (Number_of_instructors > 0));
```



**Princess Sumaya University for Technology  
King Hussein Faculty of Computing Sciences  
Computer Science Department**

**Database Systems Lab  
CS 11354  
Lab Assignment # 7  
Semester: Spring 2022/2023**

2. Create table named **Students** with the following rules and constraints:

Column name	Student_ID	Name	Address	Birthdate	Section_ID
Data type	Number	Varchar2	Varchar2	Date	Number
length	8	20	100		3
constraints	Primary key	Unique		Not null	Foreign key, if a section deleted then delete all the students automatically

```
CREATE TABLE Students (
    Student_ID NUMBER(8) CONSTRAINT student_id_pk PRIMARY
    KEY,
    name VARCHAR2(20) CONSTRAINT student_name_unique UNIQUE,
    address VARCHAR2(100),
    birthdate date CONSTRAINT student_birthdate_null NOT NULL,
    section_id NUMBER(3) CONSTRAINT student_section_id_fk
    REFERENCES sections(Section_ID) ON DELETE CASCADE
);
```

3. Add the following column to **Students** table: (**mobile**, **number**, 10) and the following column to **Sections** table (**Section\_Head**, **varchar2**, 100).

```
ALTER TABLE Students ADD mobile NUMBER(10);
```

```
ALTER TABLE sections ADD section_head varchar2(100);
```

4. Add **Not null** constraint to the **Section\_name** column in **Sections** table.?

```
ALTER TABLE sections MODIFY ( section_name NOT NULL);
```

5. Increase the length of the **address** column in **students** table to 200.

```
ALTER TABLE students MODIFY ( address varchar2(200));
```



**Princess Sumaya University for Technology  
King Hussein Faculty of Computing Sciences  
Computer Science Department**

**Database Systems Lab  
CS 11354  
Lab Assignment # 7  
Semester: Spring 2022/2023**

6. Remove **number\_of\_instructors** column from **sections** table.

**ALTER TABLE sections DROP COLUMN number\_of\_instructors;**

7. Create a backup table from **students** table called **students2** with all its information and columns.

**CREATE TABLE students2 AS SELECT \* FROM students;**

8. Drop the **students** table.

**DROP TABLE students;**

9. Rename the **students2** table to be **students**.

**RENAME STUDENTS2 TO STUDENTS;**

10. Find all the constraints names using **USER\_CONSTRAINTS** for user **system**.

**SELECT \* FROM ALL\_TABLES WHERE OWNER='SYSTEM';**