



SQL 1 PROJECT

Samirah Abed Alhusayni

مشروع ١

باستخدام ما تعلمته خلال هذه الدورة قم بتطبيق الآتي: لنفترض أن هناك مدرسة باسم التميز للتعليم الثانوي، ونريد إنشاء قاعدة بيانات مركزية لتضم جميع معلومات المعلمين والطلاب والمواد، مع العلم أنه يجب تخزين المعلومات الآتية لكل طالب (الرقم التسلسلي للطالب، اسم الطالب، تاريخ الميلاد، جنس الطالب، تاريخ الالتحاق، البريد الإلكتروني للطالب، المستوى الدراسي، المسار، المعدل التراكمي للطالب) ومعلومات المعلمين كالاتي (الرقم التسلسلي للمعلم، اسم المعلم، تاريخ الميلاد، جنس المعلم، البريد الإلكتروني للمعلم، رقم المكتب) ومعلومات المواد كالاتي (الرقم التسلسلي للمادة، اسم المادة).

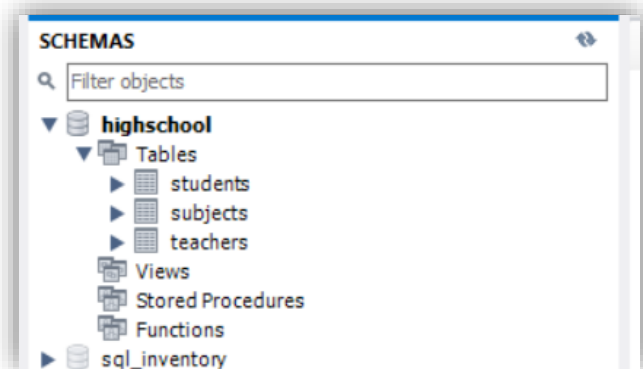
المتطلبات:

- استخدام التعليقات comments لتوضيح الأوامر.
- إنشاء قاعدة البيانات.

```
Query 1  SQL File 2* x
1  -- create center DB for highschool
2  • CREATE DATABASE highschool;
```

- إنشاء الجداول.

```
3
4  -- create tables (Students, Teachers, Subjects)
5  • USE highschool;
6  • CREATE TABLE Students(
7      Student_id INT PRIMARY KEY,
8      Student_name VARCHAR(225),
9      Sttudent_birthDate DATE ,
10     Student_gender VARCHAR(225),
11     JoiningDate Date ,
12     Student_email VARCHAR(225),
13     AcademicLevel INT,
14     Student_track VARCHAR(225),
15     Student_GPA INT
16 );
17
18 • CREATE TABLE Teachers(
19     Teacher_id INT PRIMARY KEY,
20     Teacher_name VARCHAR(225),
21     Teacher_birthDate DATE ,
22     Teacher_gender VARCHAR(225),
23     Teacher_email VARCHAR(225),
24     OfficeNum INT
25 );
26
27 • CREATE TABLE Subjects(
28     Subject_id INT PRIMARY KEY,
29     Subject_name VARCHAR(225)
30 );
31
```



- عرض الجداول المتاحة في قاعدة البيانات.

```

31
32  -- Show available tables in DB
33  SHOW TABLES;
34

```

Result Grid | Filter Rows: | Export:

| Tables_in_highschool |
|----------------------|
| students |
| subjects |
| teachers |

- إدخال معلومات ٣٠ طالب كحد أدنى.

```

35  -- Insert 30 Students Information
36  INSERT INTO Students
37  VALUES (1111, "Ali", "1997-09-04", "M", "2020-05-09", "Ali@mail.com", 4, "Scinces", 97),
38  (1112, "Mohammed", "1997-08-16", "M", "2020-05-09", "Moh@mail.com", 4, "Scinces", 85),
39  (1121, "Sarah", "1996-09-17", "F", "2020-05-09", "Sarah@mail.com", 5, "Scinces", 100),
40  (1211, "Amal", "1995-09-22", "F", "2020-05-09", "Amal@mail.com", 6, "Scinces", 80),
41  (2111, "Ayman", "1997-07-02", "M", "2020-05-09", "Ay@mail.com", 4, "Humanities", 97),
42  (2222, "saqar", "1997-09-23", "M", "2020-05-09", "Sq@mail.com", 4, "Scinces", 97),
43  (2221, "Abdullah", "1996-01-05", "M", "2020-05-09", "abd@mail.com", 5, "Humanities", 89),
44  (2212, "hamad", "1997-11-17", "M", "2020-05-09", "hamad@mail.com", 3, "Scinces", 97),
45  (2122, "Huda", "1997-09-22", "F", "2020-05-09", "hu@mail.com", 2, "Scinces", 85),
46  (1222, "Samirah", "1997-09-23", "F", "2020-05-09", "samirah@mail.com", 5, "Scinces", 97),
47  (3333, "Sami", "1997-09-01", "M", "2020-05-09", "Sami@mail.com", 4, "Scinces", 97),
48  (3331, "Abed", "1995-06-05", "M", "2020-05-09", "abed@mail.com", 6, "Humanities", 89),
49  (3313, "hmood", "1997-08-02", "M", "2020-05-09", "hamood@mail.com", 3, "Scinces", 97),
50  (3133, "Hind", "1997-09-08", "F", "2020-05-09", "hu@mail.com", 2, "Scinces", 85),
51  (1333, "Ola", "1997-09-23", "F", "2020-05-09", "Ola@mail.com", 5, "Humanities", 97),
52  (4444, "Mazen", "1997-09-15", "M", "2020-05-09", "Maz@mail.com", 4, "Scinces", 97),
53  (4441, "Faris", "1997-08-08", "M", "2020-05-09", "far@mail.com", 4, "Scinces", 85),
54  (4414, "Sumyah", "1996-08-09", "F", "2020-05-09", "Sum@mail.com", 5, "Scinces", 100),
55  (4144, "Shahad", "1995-12-27", "F", "2020-05-09", "sh@mail.com", 6, "Scinces", 80),
56  (1444, "Ibrahim", "1997-08-02", "M", "2020-05-09", "Ibr@mail.com", 4, "Humanities", 97),
57  (5555, "Abdurahman", "1997-09-16", "M", "2020-05-09", "Abd@mail.com", 4, "Scinces", 97),
58  (5551, "Turky", "1996-01-05", "M", "2020-05-09", "Tur@mail.com", 5, "Humanities", 89),
59  (5515, "Anas", "1997-11-17", "M", "2020-05-09", "Anas@mail.com", 3, "Scinces", 97),
60  (5155, "Salwa", "1997-09-29", "F", "2020-05-09", "hu@mail.com", 1, "Scinces", 85),
61  (1555, "btool", "1997-09-23", "F", "2020-05-09", "bt@mail.com", 5, "Scinces", 97),
62  (6666, "Hassan", "1997-09-29", "M", "2020-05-09", "Hassan@mail.com", 4, "Scinces", 97),
63  (6661, "Hussain", "1995-06-05", "M", "2020-05-09", "Hus@mail.com", 6, "Humanities", 89),
64  (6662, "Khalid", "1997-8-18", "M", "2020-05-09", "kh@mail.com", 3, "Scinces", 97),
65  (6663, "Norah", "1997-09-29", "F", "2020-05-09", "Nor@mail.com", 2, "Scinces", 85),
66  (6664, "Taif", "1997-09-23", "F", "2020-05-09", "Taif@mail.com", 5, "Humanities", 97);

```

- إدخال معلومات ١٠ معلمين كحد أدنى.

```
-- Insert 10 Teachers Information
```

```
INSERT INTO Teachers
```

```
VALUES (2220, "Hatem", "1997-09-29", "M", "hat@mail.com", 654),
(3330, "Ghaith", "1997-08-04", "M", "ghaith@mail.com", 678),
(4440, "Ghassan", "1997-09-07", "M", "ghass@mail.com", 876),
(5550, "Erjwan", "1997-09-03", "F", "er@mail.com", 789),
(2121, "Hussam", "1997-09-09", "M", "Hussam@mail.com", 222),
(4534, "Ezz", "1997-08-04", "M", "Ezz@mail.com", 345),
(7865, "Hattan", "1997-09-22", "M", "Hattan@mail.com", 987),
(9865, "Rhaf", "1997-09-29", "F", "Rahaf@mail.com", 654),
(5487, "Samir", "1997-09-23", "M", "samir@mail.com", 980),
(6660, "Riadh", "1997-09-15", "M", "riadh@mail.com", 432);
```

- إدخال معلومات ٦ مواد كحد أدنى.

```
82
```

```
83 -- Insert 6 Subjects Information
```

```
84 • INSERT INTO Subjects
```

```
85 VALUES (1357, "English"),
```

```
86 (1579, "Math"),
```

```
87 (3579, "Physics"),
```

```
88 (2468, "Chemistry"),
```

```
89 (4681, "Arabic"),
```

```
90 (2469, "History");
```

- عرض محتويات جميع الجداول.

```

91
92 -- Show all tables Cintent
93
94 • SELECT * FROM Students;
95

```

| Student_id | Student_name | Student_birthDate | Student_gender | JoiningDate | Student_email | AcademicLevel | Student_track | Student_GPA |
|------------|--------------|-------------------|----------------|-------------|------------------|---------------|---------------|-------------|
| 1111 | Ali | 1997-09-04 | M | 2020-05-09 | Ali@mail.com | 4 | Scinces | 97 |
| 1112 | Mohammed | 1997-08-16 | M | 2020-05-09 | Moh@mail.com | 4 | Scinces | 85 |
| 1121 | Sarah | 1996-09-17 | F | 2020-05-09 | Sarah@mail.com | 5 | Scinces | 100 |
| 1211 | Amal | 1995-09-22 | F | 2020-05-09 | Amal@mail.com | 6 | Scinces | 80 |
| 2111 | Ayman | 1997-07-02 | M | 2020-05-09 | Ay@mail.com | 4 | Humanities | 97 |
| 2222 | saqar | 1997-09-23 | M | 2020-05-09 | Sq@mail.com | 4 | Scinces | 97 |
| 2221 | Abdullah | 1996-01-05 | M | 2020-05-09 | abd@mail.com | 5 | Humanities | 89 |
| 2212 | hamad | 1997-11-17 | M | 2020-05-09 | hamad@mail.com | 3 | Scinces | 97 |
| 2122 | Huda | 1997-09-22 | F | 2020-05-09 | hu@mail.com | 2 | Scinces | 85 |
| 1222 | Samirah | 1997-09-23 | F | 2020-05-09 | samirah@mail.com | 5 | Scinces | 97 |
| 3333 | Sami | 1997-09-01 | M | 2020-05-09 | Sami@mail.com | 4 | Scinces | 97 |
| 3331 | Abed | 1995-06-05 | M | 2020-05-09 | abed@mail.com | 6 | Humanities | 89 |
| 3313 | hmood | 1997-08-02 | M | 2020-05-09 | hamood@mail.com | 3 | Scinces | 97 |
| 3133 | Hind | 1997-09-08 | F | 2020-05-09 | hu@mail.com | 2 | Scinces | 85 |
| 1333 | Ola | 1997-09-23 | F | 2020-05-09 | Ola@mail.com | 5 | Humanities | 97 |
| 4444 | Mazen | 1997-09-15 | M | 2020-05-09 | Maz@mail.com | 4 | Scinces | 97 |
| 4441 | Faris | 1997-08-08 | M | 2020-05-09 | far@mail.com | 4 | Scinces | 85 |
| 4414 | Sumyah | 1996-08-09 | F | 2020-05-09 | Sum@mail.com | 5 | Scinces | 100 |
| 4144 | Shahad | 1995-12-27 | F | 2020-05-09 | sh@mail.com | 6 | Scinces | 80 |
| 1444 | Ibrahim | 1997-08-02 | M | 2020-05-09 | Ibr@mail.com | 4 | Humanities | 97 |
| 5555 | Abdurahman | 1997-09-16 | M | 2020-05-09 | Abd@mail.com | 4 | Scinces | 97 |
| 5551 | Turky | 1996-01-05 | M | 2020-05-09 | Tur@mail.com | 5 | Humanities | 89 |
| 5515 | Anas | 1997-11-17 | M | 2020-05-09 | Anas@mail.com | 3 | Scinces | 97 |

Students 2 x

```

91
92 -- Show all tables Cintent
93
94 • SELECT * FROM Students;
95 • SELECT * FROM Teachers;
96 • SELECT * FROM Subjects;
97

```

| Teacher_id | Teacher_name | Teacher_birthDate | Teacher_gender | Teacher_email | OfficeNum |
|------------|--------------|-------------------|----------------|-----------------|-----------|
| 2220 | Hatem | 1997-09-29 | M | hat@mail.com | 654 |
| 3330 | Ghaith | 1997-08-04 | M | ghaith@mail.com | 678 |
| 4440 | Ghassan | 1997-09-07 | M | ghass@mail.com | 876 |
| 5550 | Erjwan | 1997-09-03 | F | er@mail.com | 789 |
| 2121 | Hussam | 1997-09-09 | M | Hussam@mail.com | 222 |
| 4534 | Ezz | 1997-08-04 | M | Ezz@mail.com | 345 |
| 7865 | Hattan | 1997-09-22 | M | Hattan@mail.com | 987 |
| 9865 | Rhaf | 1997-09-29 | F | Rahaf@mail.com | 654 |
| 5487 | Samir | 1997-09-23 | M | samir@mail.com | 980 |
| 6660 | Riadh | 1997-09-15 | M | riadh@mail.com | 432 |
| NULL | NULL | NULL | NULL | NULL | NULL |

```

92      -- Show all tables Cintent
93
94  ●    SELECT * FROM Students;
95  ●    SELECT * FROM Teachers;
96  ●    SELECT * FROM Subjects;
97

```

| Result Grid | | Filter Rows: |
|-------------|--------------|--------------|
| Subject_id | Subject_name | |
| 1357 | English | |
| 1579 | Math | |
| 3579 | Physics | |
| 2468 | Chemistry | |
| 4681 | Arabic | |
| 2469 | History | |
| NULL | NULL | |

- عرض محتويات جدول الطلاب مع ترتيب الصفوف تصاعديًا حسب اسم الطالب.

```

98      -- Show the contents of the students' table with row arrangement ASC by student name
99  ●    SELECT * FROM Students ORDER BY Student_name ASC;
100

```

| Result Grid | | | | | | | | | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: |
|-------------|------------|--------------|-------------------|----------------|-------------|------------------|---------------|---------------|--------------|-------|----------------|--------------------|
| | Student_id | Student_name | Student_birthDate | Student_gender | JoiningDate | Student_email | AcademicLevel | Student_track | Student_GPA | | | |
| ▶ | 2221 | Abdullah | 1996-01-05 | M | 2020-05-09 | abd@mail.com | 5 | Humanities | 89 | | | |
| | 5555 | Abdurahman | 1997-09-16 | M | 2020-05-09 | Abd@mail.com | 4 | Scinces | 97 | | | |
| | 3331 | Abed | 1995-06-05 | M | 2020-05-09 | abed@mail.com | 6 | Humanities | 89 | | | |
| | 1111 | Ali | 1997-09-04 | M | 2020-05-09 | Ali@mail.com | 4 | Scinces | 97 | | | |
| | 1211 | Amal | 1995-09-22 | F | 2020-05-09 | Amal@mail.com | 6 | Scinces | 80 | | | |
| | 5515 | Anas | 1997-11-17 | M | 2020-05-09 | Anas@mail.com | 3 | Scinces | 97 | | | |
| | 2111 | Ayman | 1997-07-02 | M | 2020-05-09 | Ay@mail.com | 4 | Humanities | 97 | | | |
| | 1555 | btool | 1997-09-23 | F | 2020-05-09 | bt@mail.com | 5 | Scinces | 97 | | | |
| | 4441 | Faris | 1997-08-08 | M | 2020-05-09 | far@mail.com | 4 | Scinces | 85 | | | |
| | 2212 | hamad | 1997-11-17 | M | 2020-05-09 | hamad@mail.com | 3 | Scinces | 97 | | | |
| | 6666 | Hassan | 1997-09-29 | M | 2020-05-09 | Hassan@mail.com | 4 | Scinces | 97 | | | |
| | 3133 | Hind | 1997-09-08 | F | 2020-05-09 | hu@mail.com | 2 | Scinces | 85 | | | |
| | 3313 | hmood | 1997-08-02 | M | 2020-05-09 | hamood@mail.com | 3 | Scinces | 97 | | | |
| | 2122 | Huda | 1997-09-22 | F | 2020-05-09 | hu@mail.com | 2 | Scinces | 85 | | | |
| | 6661 | Hussain | 1995-06-05 | M | 2020-05-09 | Hus@mail.com | 6 | Humanities | 89 | | | |
| | 1444 | Ibrahim | 1997-08-02 | M | 2020-05-09 | Ibr@mail.com | 4 | Humanities | 97 | | | |
| | 6662 | Khalid | 1997-08-18 | M | 2020-05-09 | kh@mail.com | 3 | Scinces | 97 | | | |
| | 4444 | Mazen | 1997-09-15 | M | 2020-05-09 | Maz@mail.com | 4 | Scinces | 97 | | | |
| | 1112 | Mohammed | 1997-08-16 | M | 2020-05-09 | Moh@mail.com | 4 | Scinces | 85 | | | |
| | 6663 | Norah | 1997-09-29 | F | 2020-05-09 | Nor@mail.com | 2 | Scinces | 85 | | | |
| | 1333 | Ola | 1997-09-23 | F | 2020-05-09 | Ola@mail.com | 5 | Humanities | 97 | | | |
| | 5155 | Salwa | 1997-09-29 | F | 2020-05-09 | hu@mail.com | 1 | Scinces | 85 | | | |
| | 3333 | Sami | 1997-09-01 | M | 2020-05-09 | Sami@mail.com | 4 | Scinces | 97 | | | |
| | 1222 | Samirah | 1997-09-23 | F | 2020-05-09 | samirah@mail.com | 5 | Scinces | 97 | | | |
| | 2222 | saqar | 1997-09-23 | M | 2020-05-09 | Sq@mail.com | 4 | Scinces | 97 | | | |
| | 1121 | Sarah | 1996-09-17 | F | 2020-05-09 | Sarah@mail.com | 5 | Scinces | 100 | | | |
| | 4444 | Shahad | 1995-12-27 | F | 2020-05-09 | sh@mail.com | 6 | Scinces | 80 | | | |

- عرض محتويات جدول الطلاب مع إعطاء اسم مستعار لحقل "اسم الطالب" لاختصار اسم العمود أو جعله ذات معنى.

```

101  /* Show the contents of the students table and give an alias to the
102
103  "student name" field to shorten the name of the column or make it meaningful */
104
105  • SELECT
106      Student_id,
107      Student_name As sName,
108      Student_birthDate ,
109      Student_gender ,
110      JoiningDate ,
111      Student_email ,
112
113

```

| Student_id | sName | Student_birthDate | Student_gender | JoiningDate | Student_email | AcademicLevel | Student_track | Student_GPA |
|------------|----------|-------------------|----------------|-------------|------------------|---------------|---------------|-------------|
| 1111 | Ali | 1997-09-04 | M | 2020-05-09 | Ali@mail.com | 4 | Scinces | 97 |
| 1112 | Mohammed | 1997-08-16 | M | 2020-05-09 | Moh@mail.com | 4 | Scinces | 85 |
| 1121 | Sarah | 1996-09-17 | F | 2020-05-09 | Sarah@mail.com | 5 | Scinces | 100 |
| 1211 | Amal | 1995-09-22 | F | 2020-05-09 | Amal@mail.com | 6 | Scinces | 80 |
| 2111 | Ayman | 1997-07-02 | M | 2020-05-09 | Ay@mail.com | 4 | Humanities | 97 |
| 2222 | saqar | 1997-09-23 | M | 2020-05-09 | Sq@mail.com | 4 | Scinces | 97 |
| 2221 | Abdullah | 1996-01-05 | M | 2020-05-09 | abd@mail.com | 5 | Humanities | 89 |
| 2212 | hamad | 1997-11-17 | M | 2020-05-09 | hamad@mail.com | 3 | Scinces | 97 |
| 2122 | Huda | 1997-09-22 | F | 2020-05-09 | hu@mail.com | 2 | Scinces | 85 |
| 1222 | Samirah | 1997-09-23 | F | 2020-05-09 | samirah@mail.com | 5 | Scinces | 97 |
| 3333 | Sami | 1997-09-01 | M | 2020-05-09 | Sami@mail.com | 4 | Scinces | 97 |

students 6 x

- التعديل على البيانات.

○ التعديل على بيانات احد الطلاب وتغيير البريد الالكتروني للطالب.

```

117  -- Updating a student's data and changing the student's e-mail
118  • UPDATE Students
119      SET Student_email = "Mohammad@mail.com"
120      WHERE Student_id =1112;
121  • SELECT * FROM Students;
122

```

| Student_id | Student_name | Student_birthDate | Student_gender | JoiningDate | Student_email | AcademicLevel | Student_track | Student_G |
|------------|--------------|-------------------|----------------|-------------|-------------------|---------------|---------------|-----------|
| 1111 | Ali | 1997-09-04 | M | 2020-05-09 | Ali@mail.com | 4 | Scinces | 97 |
| 1112 | Mohammed | 1997-08-16 | M | 2020-05-09 | Mohammad@mail.com | 4 | Scinces | 85 |
| 1121 | Sarah | 1996-09-17 | F | 2020-05-09 | Sarah@mail.com | 5 | Scinces | 100 |
| 1211 | Amal | 1995-09-22 | F | 2020-05-09 | Amal@mail.com | 6 | Scinces | 80 |
| 2111 | Ayman | 1997-07-02 | M | 2020-05-09 | Ay@mail.com | 4 | Humanities | 97 |
| 2222 | saqar | 1997-09-23 | M | 2020-05-09 | Sq@mail.com | 4 | Scinces | 97 |
| 2221 | Abdullah | 1996-01-05 | M | 2020-05-09 | abd@mail.com | 5 | Humanities | 89 |
| 2212 | hamad | 1997-11-17 | M | 2020-05-09 | hamad@mail.com | 3 | Scinces | 97 |
| 2122 | Huda | 1997-09-22 | F | 2020-05-09 | hu@mail.com | 2 | Scinces | 85 |
| 1222 | Samirah | 1997-09-23 | F | 2020-05-09 | samirah@mail.com | 5 | Scinces | 97 |
| 3333 | Sami | 1997-09-01 | M | 2020-05-09 | Sami@mail.com | 4 | Scinces | 97 |

Students 7 x

○ التعديل على بيانات احد المعلمين وتغيير رقم المكتب الخاص به.


```

122
123 -- Updating a teacher's data and changing his office number
124 • UPDATE Teachers
125 SET OfficeNum = 789
126 WHERE Teacher_id =3330;
127 • SELECT * FROM Teachers;

```

| Teacher_id | Teacher_name | Teacher_birthDate | Teacher_gender | Teacher_email | OfficeNum |
|------------|--------------|-------------------|----------------|-----------------|-----------|
| 2220 | Hatem | 1997-09-29 | M | hat@mail.com | 654 |
| 3330 | Ghaith | 1997-08-04 | M | ghaith@mail.com | 789 |
| 4440 | Ghassan | 1997-09-07 | M | ghass@mail.com | 876 |
| 5550 | Erjwan | 1997-09-03 | F | er@mail.com | 789 |
| 2121 | Hussam | 1997-09-09 | M | Hussam@mail.com | 222 |
| 4534 | Ezz | 1997-08-04 | M | Ezz@mail.com | 345 |
| 7865 | Hattan | 1997-09-22 | M | Hattan@mail.com | 987 |
| 9865 | Rhaf | 1997-09-29 | F | Rahaf@mail.com | 654 |
| 5487 | Samir | 1997-09-23 | M | samir@mail.com | 980 |
| 6660 | Riadh | 1997-09-15 | M | riadh@mail.com | 432 |
| NULL | NULL | NULL | NULL | NULL | NULL |

Teachers 8

Output

- التعديل على الجداول.

- تعديل اسم احد الجداول.

```

128
129 -- Modify the name of one of the Tables
130
131 • ALTER TABLE Subjects
132 RENAME TO Courses;
133 • SHOW TABLES;

```

| Tables_in_highschool |
|----------------------|
| courses |
| students |
| teachers |

- قم بأخذ لقطة شاشة لكل مما سبق مع النتائج.

ملاحظات:

- الرقم التسلسلي هو id.

- الجنس (F) أو (M).

- المستوى الدراسي يتكون من ستة مستويات (1, 2, 3, 4, 5, 6) ،
- المسار (علمي أو انساني).
- المعدل التراكمي من 100.