

مشروع ١ - دورة 1 SQL

اسم المتدرب: مريم الرادادي

اسم المشرف: غادة المطيري

وصف المشروع: قاعدة بيانات لمدرسة ثانوية تحتوي على معلومات الطلاب والمعلمين والمواد.

متطلبات المشروع:

- انشاء قاعدة البيانات

```
1 -- create the database
2 ● CREATE DATABASE TamayozHighSchool;
3
```

- انشاء الجداول
 - انشاء جدول الطالب

```
5 ● USE TamayozHighSchool;
6
7 ● CREATE TABLE Student (
8     student_id          INT          PRIMARY KEY AUTO_INCREMENT,
9     student_name        VARCHAR(255) NOT NULL,
10    birth_date           DATETIME     NOT NULL,
11    gender                ENUM ('M','F') NOT NULL, -- Enumeration of either 'M' or 'F'
12    enrollment_date      DATETIME     NOT NULL,
13    student_email         VARCHAR(255),
14    student_level        INT          NOT NULL,
15    track                 VARCHAR(255) NOT NULL,
16    GPA                   DOUBLE
17 );
18
```

○ انشاء جدول المعلم

```
19 • ○ CREATE TABLE Teacher (  
20     teacher_id          INT          PRIMARY KEY AUTO_INCREMENT,  
21     teacher_name        VARCHAR(255)  NOT NULL,  
22     birth_date           DATETIME     NOT NULL,  
23     gender               ENUM ('M','F') NOT NULL, -- Enumeration of either 'M' or 'F'  
24     teacher_email        VARCHAR(255),  
25     office_no            CHAR(4)      NOT NULL  
26 );  
27
```

○ انشاء جدول المواد

```
29 • ○ CREATE TABLE Course (  
30     course_id            INT          PRIMARY KEY AUTO_INCREMENT,  
31     course_name          VARCHAR(255)  NOT NULL  
32 );  
33
```

● عرض الجداول المتاحة في قاعدة البيانات

```
34 • USE TamayozHighSchool;  
35 • SHOW TABLES;
```

100% 10:32

Result Grid



Filter Rows:



Search

Export:



Tables_in_tamayozhighschool

► Course

Student

Teacher

```
34 • SHOW COLUMNS FROM Student;
```

100% 27:34

Result Grid



Filter Rows:



Search

Export:



Field	Type	Null	Key	Default	Extra
► student_id	int	NO	PRI	NULL	auto_increment
student_name	varchar(255)	NO		NULL	
birth_date	datetime	NO		NULL	
gender	enum('M','F')	NO		NULL	
enrollment_date	datetime	NO		NULL	
student_email	varchar(255)	YES		NULL	
student_level	int	NO		NULL	
track	varchar(255)	NO		NULL	
GPA	double	YES		NULL	

34 • SHOW COLUMNS FROM Teacher;

100% 27:34

Result Grid



Filter Rows:



Search

Export:



Field	Type	Null	Key	Default	Extra
▶ teacher_id	int	NO	PRI	NULL	auto_increment
teacher_name	varchar(255)	NO		NULL	
birth_date	datetime	NO		NULL	
gender	enum('M','F')	NO		NULL	
teacher_email	varchar(255)	YES		NULL	
office_no	char(4)	NO		NULL	

34 • SHOW COLUMNS FROM Course;

100% 1:33

Result Grid



Filter Rows:



Search

Export:



Field	Type	Null	Key	Default	Extra
▶ course_id	int	NO	PRI	NULL	auto_increment
course_name	varchar(255)	NO		NULL	

• إدخال معلومات ٣٠ طالب كحد أدنى

```
34 • USE TamayozHighSchool;
35
36 • INSERT INTO Student (student_name, birth_date, gender , enrollment_date, student_email, student_level, track, GPA)
37 VALUES ("Nora", "1998-12-31", 'F', "2014-09-11", "nora@gmail.com", 1, "science", 4.13),
38 ("Maryam", "1998-12-31", 'F', "2009-09-11", "maryam@gmail.com", 3, "science", 2.93),
39 ("Shahad", "1998-12-31", 'F', "2011-09-11", "shahad@gmail.com", 2, "science", 4.25),
40 ("Mohammed", "1998-12-31", 'M', "2009-09-11", "mohammed@gmail.com", 4, "humanities", 4.66),
41 ("Abdulaziz", "1998-12-31", 'M', "2006-09-11", "abdulaziz@gmail.com", 5, "science", 3.93),
42 ("Rashed", "1998-12-31", 'M', "2006-09-11", "rashed@gmail.com", 5, "science", 2.80),
43 ("Saud", "1998-12-31", 'M', "2011-09-11", "nora@gmail.com", 3, "humanities", 4.83),
44 ("Nora", "1998-12-31", 'F', "2009-09-11", "nora@gmail.com", 4, "science", 4.13),
45 ("Sama", "1998-12-31", 'F', "2014-09-11", "sama@gmail.com", 1, "humanities", 4.18),
46 ("Afnan", "1998-12-31", 'F', "2014-09-11", "afnan@gmail.com", 1, "science", 4.13),
47 ("Fatimah", "1998-12-31", 'F', "2014-09-11", "fatimah@gmail.com", 1, "science", 4.13),
48 ("Samar", "1998-12-31", 'F', "2014-09-11", "samar@gmail.com", 1, "humanities", 2.30),
49 ("Raghad", "1998-12-31", 'F', "2014-09-11", "raghad@gmail.com", 1, "science", 4.13),
50 ("Rana", "1998-12-31", 'F', "2014-09-11", "rana@gmail.com", 1, "science", 4.13),
51 ("Asmaa", "1998-12-31", 'F', "2009-09-11", "asmaa@gmail.com", 4, "humanities", 4.13),
52 ("Abrar", "1998-12-31", 'F', "2014-09-11", "abrar@gmail.com", 1, "science", 4.13),
53 ("Sara", "1998-12-31", 'F', "2014-09-11", "sara@gmail.com", 1, "humanities", 1.15),
54 ("Majid", "1998-12-31", 'M', "2014-09-11", "majid@gmail.com", 1, "science", 4.13),
55 ("Saeed", "1998-12-31", 'M', "2011-09-11", "saeed@gmail.com", 2, "humanities", 4.13),
56 ("Aziz", "1998-12-31", 'M', "2014-09-11", "aziz@gmail.com", 1, "science", 4.13),
57 ("Abdullah", "1998-12-31", 'M', "2014-09-11", "abdullah@gmail.com", 1, "science", 4.13),
58 ("Khalid", "1998-12-31", 'M', "2014-09-11", "khalid@gmail.com", 1, "humanities", 4.13),
59 ("Rashed", "1998-12-31", 'M', "2014-09-11", "rashed@gmail.com", 1, "science", 4.13),
60 ("Amal", "1998-12-31", 'F', "2008-09-11", "amal@gmail.com", 5, "science", 4.13),
61 ("saud", "1998-12-31", 'M', "2014-09-11", "saud@gmail.com", 1, "humanities", 2.13),
62 ("Mohammed", "1998-12-31", 'M', "2014-09-11", "mohammed@gmail.com", 1, "science", 4.13),
63 ("Maryam", "1998-12-31", 'F', "2006-09-11", "maryam@gmail.com", 3, "humanities", 4.13),
64 ("Dania", "1998-12-31", 'F', "2014-09-11", "dania@gmail.com", 1, "science", 4.13),
65 ("Shahad", "1998-12-31", 'F', "2014-09-11", "shahad@gmail.com", 1, "science", 4.13),
66 ("Ahmed", "1998-12-31", 'M', "2014-09-11", "ahmed@gmail.com", 1, "science", 4.13);
```

• إدخال معلومات ١٠ معلمين كحد أدنى

```
--  
77 • INSERT INTO Teacher (teacher_name, birth_date, gender, teacher_email, office_no)  
78 VALUES ("Ahmad", "1987-01-09", 'M', "ahmad@gmail.com", "C312"),  
79 ("Ahmad", "1987-01-09", 'M', "ahmad@gmail.com", "B310"),  
80 ("Abdullah", "1977-01-09", 'M', "Abdullah@gmail.com", "A120"),  
81 ("Shahad", "1997-01-09", 'F', "shahad@gmail.com", "B320"),  
82 ("Ahmad", "1988-01-09", 'M', "ahmad@gmail.com", "A115"),  
83 ("Dania", "1987-01-09", 'F', "dania@gmail.com", "A312"),  
84 ("Aziz", "1978-01-09", 'M', "aziz@gmail.com", "B322"),  
85 ("Mohammed", "1987-01-09", 'M', "mohammed@gmail.com", "A123"),  
86 ("Sara", "1987-01-09", 'F', "sara@gmail.com", "C320"),  
87 ("Nora", "1987-01-09", 'F', "nora@gmail.com", "C312");  
--
```

- إدخال معلومات ٦ مواد كحد أدنى

```
76
77 • INSERT INTO Course (course_name)
78 VALUES ("Art"),
79 ("Algebra"),
80 ("Calculus"),
81 ("Geography"),
82 ("Religion"),
83 ("Chemistry");
```


● عرض محتويات جميع الجداول

122

123

124 •

```
-- select all columns from the student table
```

```
SELECT * FROM Student;
```

[illegible]

84
85 • **SELECT * FROM** Teacher;
86

100% 1:90

Result Grid Filter Rows: Search Edit: Export/Import:

teacher_id	teacher_name	birth_date	gender	teacher_email	office_no
2	Ahmad	1987-01-09 00:00:00	M	ahmad@gmail.com	C312
3	Ahmad	1987-01-09 00:00:00	M	ahmad@gmail.com	B310
4	Abdullah	1977-01-09 00:00:00	M	Abdullah@gmail.com	A120
5	Shahad	1997-01-09 00:00:00	F	shahad@gmail.com	B320
6	Ahmad	1988-01-09 00:00:00	M	ahmad@gmail.com	A115
7	Dania	1987-01-09 00:00:00	F	dania@gmail.com	A312
8	Aziz	1978-01-09 00:00:00	M	aziz@gmail.com	B322
9	Mohammed	1987-01-09 00:00:00	M	mohammed@gmail.com	A123
10	Sara	1987-01-09 00:00:00	F	sara@gmail.com	C320
11	Nora	1987-01-09 00:00:00	F	nora@gmail.com	C312

84

85

86

87

SELECT * FROM Course;

100%

1:91

Result Grid

Filter Rows:

Search

Edit:

course_id	course_name
1	Art
2	Algebra
3	Calculus
4	Geography
5	Religion
6	Chemistry
NULL	NULL

- عرض محتويات جدول الطلاب مع ترتيب الصفوف تصاعدياً حسب اسم الطالب

```
-- select all columns from student table
-- and order the results based on student name in ascending order
```

```
SELECT * FROM Student
ORDER BY student_name ASC;
```

84
85 •
86
87
88

```
SELECT * FROM Student
ORDER BY student_name ASC;
```

100% 27:86

Result Grid Filter Rows: Search Edit: Export/Import:

student_id	student_name	birth_date	gender	enrollment_date	student_email	student_level	track	GPA
6	Abdulaziz	1998-12-31 00:00:00	M	2006-09-11 00:00:00	abdulaziz@gmail.com	5	science	3.93
22	Abdullah	1998-12-31 00:00:00	M	2014-09-11 00:00:00	abdullah@gmail.com	1	science	4.13
17	Abrar	1998-12-31 00:00:00	F	2014-09-11 00:00:00	abrar@gmail.com	1	science	4.13
11	Afnan	1998-12-31 00:00:00	F	2014-09-11 00:00:00	afnan@gmail.com	1	science	4.13
31	Ahmed	1998-12-31 00:00:00	M	2014-09-11 00:00:00	ahmed@gmail.com	1	science	4.13
25	Amal	1998-12-31 00:00:00	F	2008-09-11 00:00:00	amal@gmail.com	5	science	4.13
16	Asmaa	1998-12-31 00:00:00	F	2009-09-11 00:00:00	asmaa@gmail.com	4	humanities	4.13
21	Aziz	1998-12-31 00:00:00	M	2014-09-11 00:00:00	aziz@gmail.com	1	science	4.13
29	Dania	1998-12-31 00:00:00	F	2014-09-11 00:00:00	dania@gmail.com	1	science	4.13
12	Fatimah	1998-12-31 00:00:00	F	2014-09-11 00:00:00	fatimah@gmail.com	1	science	4.13
23	Khalid	1998-12-31 00:00:00	M	2014-09-11 00:00:00	khalid@gmail.com	1	humanities	4.13
19	Majid	1998-12-31 00:00:00	M	2014-09-11 00:00:00	majid@gmail.com	1	science	4.13
3	Maryam	1998-12-31 00:00:00	F	2009-09-11 00:00:00	maryam@gmail.com	3	science	2.93
28	Maryam	1998-12-31 00:00:00	F	2006-09-11 00:00:00	maryam@gmail.com	3	humanities	4.13
5	Mohammed	1998-12-31 00:00:00	M	2009-09-11 00:00:00	mohammed@gmail....	4	humanities	4.66
27	Mohammed	1998-12-31 00:00:00	M	2014-09-11 00:00:00	mohammed@gmail....	1	science	4.13
2	Nora	1998-12-31 00:00:00	F	2014-09-11 00:00:00	nora@gmail.com	1	science	4.13
9	Nora	1998-12-31 00:00:00	F	2009-09-11 00:00:00	nora@gmail.com	4	science	4.13
14	Raghad	1998-12-31 00:00:00	F	2014-09-11 00:00:00	raghad@gmail.com	1	science	4.13
15	Rana	1998-12-31 00:00:00	F	2014-09-11 00:00:00	rana@gmail.com	1	science	4.13
7	Rashed	1998-12-31 00:00:00	M	2006-09-11 00:00:00	rashed@gmail.com	5	science	2.9

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

```

111
112 • SELECT student_id,
113      student_name AS "First Name",
114      birth_date, gender,
115      enrollment_date, student_email,
116      student_level, track, GPA
117 FROM Student;
118

```

100% 14:117

Result Grid



Filter Rows: Search

Edit:

Export/Import:

student_id	First Name	birth_date	gender	enrollment_date	student_email	student_level	track	GPA	
2	Nora	1998-12-31 00:00:00	F	2014-09-11 00:00:00	nora@gmail.com	1	science	4.13	
3	Maryam	1998-12-31 00:00:00	F	2009-09-11 00:00:00	maryam@gmail.com	3	science	2.93	
4	Shahad	1998-12-31 00:00:00	F	2011-09-11 00:00:00	shahad@gmail.com	2	science	4.25	
5	Mohammed	1998-12-31 00:00:00	M	2009-09-11 00:00:00	mohammed@gmail.com	4	humanities	4.66	
6	Abdulaziz	1998-12-31 00:00:00	M	2006-09-11 00:00:00	abdulaziz@gmail.com	5	science	3.93	
7	Rashed	1998-12-31 00:00:00	M	2006-09-11 00:00:00	rashed@gmail.com	5	science	2.8	
8	Saud	1998-12-31 00:00:00	M	2011-09-11 00:00:00	nora@gmail.com	3	humanities	4.83	
9	Nora	1998-12-31 00:00:00	F	2009-09-11 00:00:00	nora@gmail.com	4	science	4.13	
10	Sama	1998-12-31 00:00:00	F	2014-09-11 00:00:00	sama@gmail.com	1	humanities	4.18	
11	Afnan	1998-12-31 00:00:00	F	2014-09-11 00:00:00	afnan@gmail.com	1	science	4.13	
12	Fatimah	1998-12-31 00:00:00	F	2014-09-11 00:00:00	fatimah@gmail.com	1	science	4.13	
13	Samar	1998-12-31 00:00:00	F	2014-09-11 00:00:00	samar@gmail.com	1	humanities	2.3	
14	Raghad	1998-12-31 00:00:00	F	2014-09-11 00:00:00	raghad@gmail.com	1	science	4.13	
15	Rana	1998-12-31 00:00:00	F	2014-09-11 00:00:00	rana@gmail.com	1	science	4.13	
16	Asmaa	1998-12-31 00:00:00	F	2009-09-11 00:00:00	asmaa@gmail.com	4	humanities	4.13	
17	Abrar	1998-12-31 00:00:00	F	2014-09-11 00:00:00	abrar6123@gmail.com	1	science	4.13	

- قبل:**

17	Abrar	1998-12-31 00:00:00	F	2014-09-11 00:00:00	abrar@gmail.com	1	science	4.13
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




```
87
88 • UPDATE Student
89 SET student_email = "abrar6123@gmail.com"
90 WHERE student_id = 17;
91 • SELECT * FROM Student WHERE student_id = 17;
92 |
```

[illegible]

- التعديل على بيانات احد المعلمين وتغيير رقم المكتب الخاص به

```
87
88 • UPDATE Teacher
89   SET office_no = "AAA"
90   WHERE teacher_id = 3;
91 • SELECT * FROM Teacher WHERE teacher_id = 3;
92
```

100% 30:86

Result Grid   Filter Rows: Edit:    Export/Import:  

teacher_id	teacher_name	birth_date	gender	teacher_email	office_no
▶ 3	Ahmad	1987-01-09 00:00:00	M	ahmad@gmail.com	AAA

- التعديل على الجداول
 - تعديل اسم احد الجداول

```
109 |
110 ● USE TamayozHighSchool;
111
112 ● ALTER TABLE Student
113     RENAME TO Student_Updated;
114
115 ● SHOW TABLES;
116
117
```

100% 1:109

Result Grid Filter Rows: Search Export:

Tables_in_tamayozhighschool	
Course	
Student_Updated	
Teacher	

