

DATA ANALYTICS REFERENCE DOCUMENT	
Document Title:	Applied Databases
Document No.:	Topic 2 Exercise Sheet
Student:	Gerhard van der Linde

REVISION HISTORY

Revision	Details of Modification(s)	Reason for modification	Date	By
0	Draft release	Document description here	2019/01/29 16:25	Gerhard van der Linde

Applied Databases - Week 2

1. Get school.sql from Moodle and import it into MySQL.

- Right Click and select "save as"
- `mysql -u root -p <school.sql`

2. What is the maximum length of data that can be inserted into the Name attribute of the subject table?

```
mysql> describe subject;
```

Field	Type	Null	Key	Default	Extra
Name	varchar(15)	NO	PRI	NULL	
Teacher	varchar(20)	YES		NULL	
OnLeavingCert	tinyint(1)	YES		NULL	

3 rows in set (0.00 sec)

3. What is the Primary Key of the teacher table?

```
mysql> describe teacher;
```

Field	Type	Null	Key	Default	Extra
tid	int(11)	NO	PRI	NULL	auto_increment
Name	varchar(20)	YES		NULL	
level	enum('J','L')	YES		NULL	
experience	int(11)	YES		NULL	
dob	date	YES		NULL	

5 rows in set (0.00 sec)

4. What is the Primary Key of the subject table?

```
mysql> describe subject;
```

Field	Type	Null	Key	Default	Extra
Name	varchar(15)	NO	PRI	NULL	
Teacher	varchar(20)	YES		NULL	
OnLeavingCert	tinyint(1)	YES		NULL	

3 rows in set (0.00 sec)

5. Show all data contained in the subject table.

```
mysql> select * from subject;
```

Name	Teacher	OnLeavingCert
Biology	Mr. Pasteur	1
Colouring	Mr. Picasso	0
English	Mr. Kavanagh	1
French	Ms. Dubois	1
Maths	Mr. Hawking	1
Religion	Fr. Lynch	1
Spelling	Ms.	

7 rows in set (0.00 sec)

6. Show all names of all subjects that are on the leaving cert.

```
mysql> select * from subject  
-> where OnLeavingCert = '1';
```

Name	Teacher	OnLeavingCert
Biology	Mr. Pasteur	1
English	Mr. Kavanagh	1
French	Ms. Dubois	1
Maths	Mr. Hawking	1
Religion	Fr. Lynch	1

5 rows in set (0.00 sec)

7. Show all name and experience of all teachers who are qualified to teach to Leaving Cert.

```
mysql> select * from teacher
-> where level = 'L';
```

tid	Name	level	experience	dob
1	Mr. Pasteur	L	15	1960-02-02
2	Ms. Dubois	L	22	1967-09-02
4	Mr. Hawking	L	40	1951-02-19
7	Fr. Lynch	L	55	1939-03-31

```
4 rows in set (0.00 sec)
```

8. Show all details of all subjects who are taught by teachers whose title is not "Mr."

```
mysql> select * from teacher
-> where name NOT LIKE 'Mr.%;'
-> ;
```

tid	Name	level	experience	dob
2	Ms. Dubois	L	22	1967-09-02
3	Ms. Smith	J	4	1980-03-23
7	Fr. Lynch	L	55	1939-03-31

```
3 rows in set (0.00 sec)
```

9. Show all details of all teachers who were born in January, February or March, and who can teach as far as Junior Cert only.

```
mysql> select * from teacher
-> where (month(dob) != 1
-> or month(dob) != 2
-> or month(dob) != 3)
-> and level = 'j';
```

tid	Name	level	experience	dob
3	Ms. Smith	J	4	1980-03-23
5	Mr. Kavanagh	J	50	1949-11-01
6	Mr. Picasso	J	42	1939-03-30

```
3 rows in set (0.00 sec)
```

10. Show all unique month names that teachers were born in.

```
mysql> SELECT distinct month(dob) mon FROM school.teacher;
+-----+
| mon |
+-----+
| 2 |
| 9 |
| 3 |
| 11 |
+-----+
4 rows in set (0.00 sec)
```

11. Show all details of all teachers, sorted by first by experience, then level.

```
mysql> SELECT * FROM school.teacher
-> order by experience, level;
+-----+-----+-----+-----+-----+
| tid | Name          | level | experience | dob          |
+-----+-----+-----+-----+-----+
| 3 | Ms. Smith     | J     | 4          | 1980-03-23  |
| 1 | Mr. Pasteur   | L     | 15         | 1960-02-02  |
| 2 | Ms. Dubois    | L     | 22         | 1967-09-02  |
| 4 | Mr. Hawking   | L     | 40         | 1951-02-19  |
| 6 | Mr. Picasso   | J     | 42         | 1939-03-30  |
| 5 | Mr. Kavanagh | J     | 50         | 1949-11-01  |
| 7 | Fr. Lynch     | L     | 55         | 1939-03-31  |
+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)
```

12. Show all details of all subjects whose 3rd or 4th letter is "l". Sort them by name.

```
mysql> SELECT * FROM school.subject
-> where name like '___l%'
-> or name like '____l%'
-> order by name;
+-----+-----+-----+
| Name      | Teacher       | OnLeavingCert |
+-----+-----+-----+
| English   | Mr. Kavanagh | 1             |
| Religion  | Fr. Lynch    | 1             |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

13. Show the name of all teachers who have 10, 15, 20, 25, 30, 35, 40, 45, 50, 55 or 60 years experience. Sort from youngest to oldest.

```
mysql> SELECT * FROM school.teacher  
-> where experience in (10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60);
```

tid	Name	level	experience	dob
1	Mr. Pasteur	L	15	1960-02-02
4	Mr. Hawking	L	40	1951-02-19
5	Mr. Kavanagh	J	50	1949-11-01
7	Fr. Lynch	L	55	1939-03-31

4 rows in set (0.00 sec)

From:

<http://hdip-data-analytics.com/> - HDip Data Analytics

Permanent link:

<http://hdip-data-analytics.com/submissions/worksheet/databases/topic2>

Last update: 2020/06/20 14:39