

CCINFOM

Writing SQL SELECT Statements

Information Technology Department
College of Computer Studies
De La Salle University

1



**MySQL
Script Files
to be Used
in this
Session**

dbworld.sql



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SQL Writing Lesson: dbworld.sql

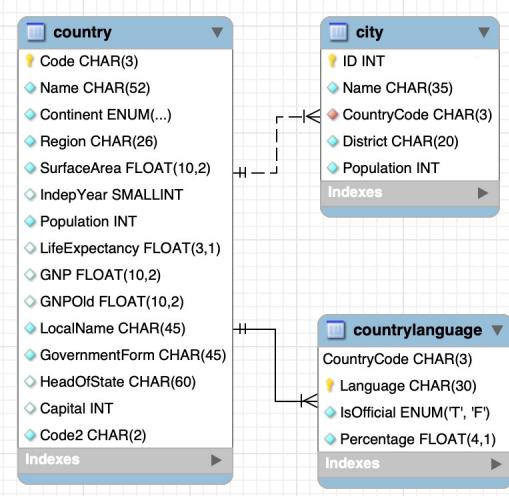


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1. Get all the cities of Thailand.
2. Get all the cities of Thailand with a population of more than 100,000.
3. Get all the countries with a life expectancy of 70 to 80 years old.
4. Get all the continents with countries having a population below 1,000.
5. Get all the countries (name, continent, governmentform) that are Republics.
6. Get all the countries that has celebrated at least 100 years of independence.
7. Get all the districts of Bangladesh.
8. Get all the countries where more than 80% speak Arabic.

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dbworld schema



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Import the Database into MySQL Workbench

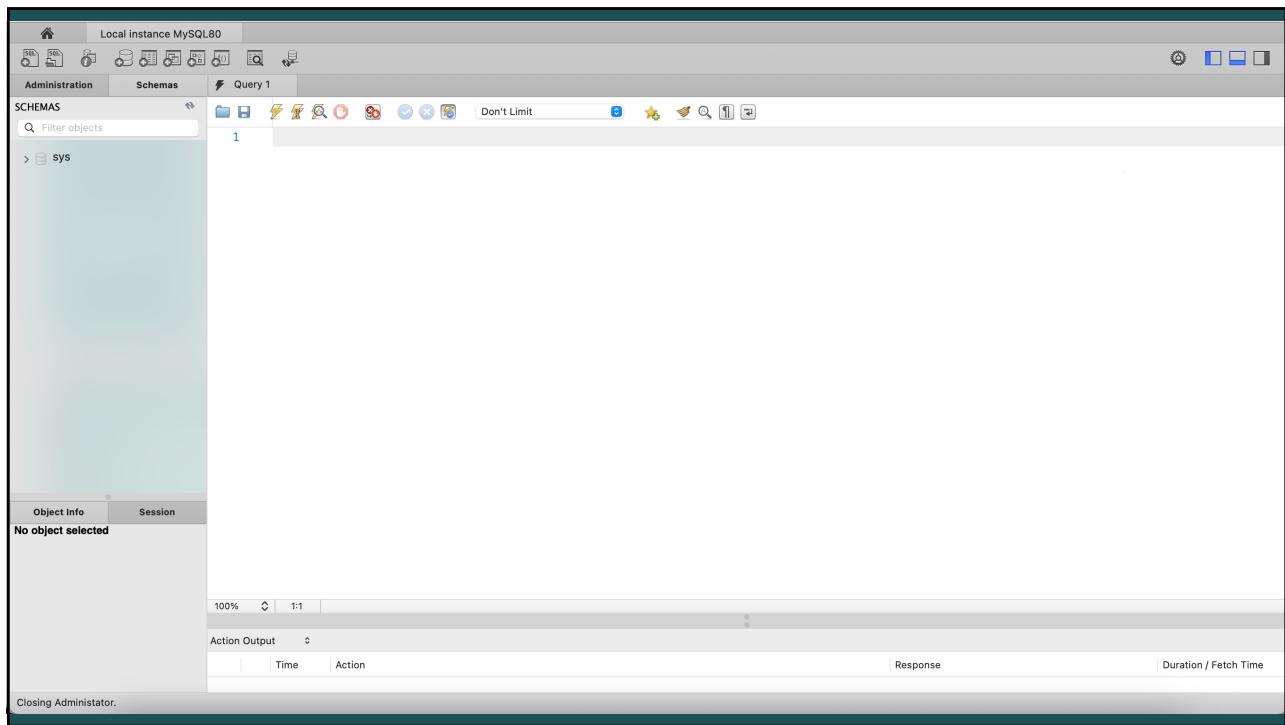


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The screenshot shows the MySQL Workbench interface. The title bar reads "Local instance MySQL80". The main area features a large "Welcome to MySQL Workbench" heading. Below it is a descriptive paragraph about the tool's capabilities. At the bottom of the main area are three links: "Browse Documentation >", "Read the Blog >", and "Discuss on the Forums >". On the left side, there is a vertical toolbar with icons for Home, Import, Export, and Refresh. The central workspace displays a "MySQL Connections" section with a list titled "Local instance MySQL80" containing a single entry: "root" with "localhost:3306". A search bar labeled "Filter connections" is located at the top right of this section. A status bar at the bottom indicates "Closing Administrator.".

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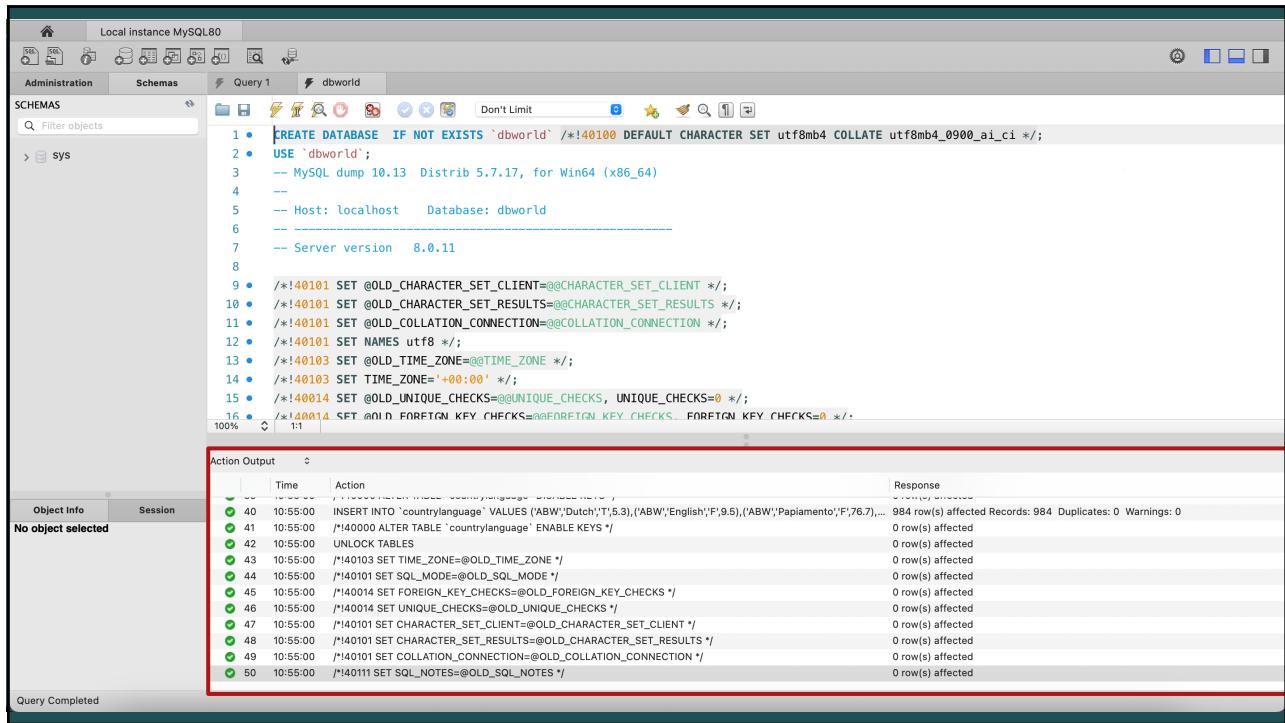


14

```

1 • CREATE DATABASE IF NOT EXISTS `dbworld` /*!40100 DEFAULT CHARACTER SET utf8mb4 COLLATE utf8mb4_0900_ai_ci */;
2 • USE `dbworld`;
3 -- MySQL dump 10.13 Distrib 5.7.17, for Win64 (x86_64)
4 --
5 -- Host: localhost    Database: dbworld
6 --
7 -- Server version  8.0.11
8
9 • /*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
10 • /*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
11 • /*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
12 • /*!40101 SET NAMES utf8 */;
13 • /*!40103 SET @OLD_TIME_ZONE=@TIME_ZONE */;
14 • /*!40103 SET TIME_ZONE='+00:00' */;
15 • /*!40104 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
16 • /*!40104 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0 */;
17 • /*!40101 SET @OLD_SQL_MODE=@@SQL_MODE, SQL_MODE='NO_AUTO_VALUE_ON_ZERO' */;
18 • /*!40111 SET @OLD_SQL_NOTES=@@SQL_NOTES, SQL_NOTES=0 */;
19
20 --
21 -- Table structure for table `city`
22 --
23
24 • DROP TABLE IF EXISTS `city`;
25 • /*!40101 SET @saved_cs_client      = @@character_set_client */;
```

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```

CREATE DATABASE IF NOT EXISTS `dbworld` /*!40100 DEFAULT CHARACTER SET utf8mb4 COLLATE utf8mb4_0900_ai_ci */;
USE `dbworld`;
-- MySQL dump 10.13 Distrib 5.7.17, for Win64 (x86_64)
--
-- Host: localhost Database: dbworld
--
-- Server version 8.0.11

/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!40101 SET NAMES utf8 */;
/*!40103 SET TIME_ZONE=@TIME_ZONE */;
/*!40103 SET TIME_ZONE='+00:00' */;
/*!40014 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
/*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0 */;

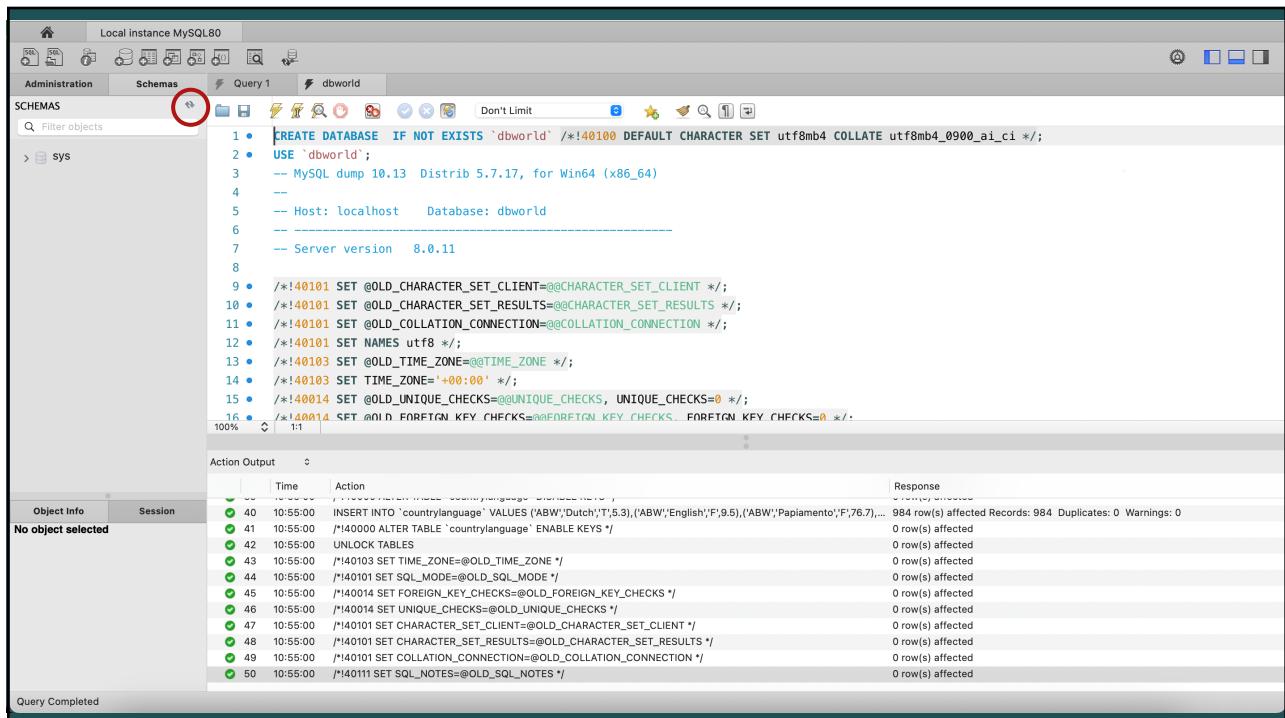
Action Output
Time Action Response
38 10:55:00 /*40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */
39 40 10:55:00 INSERT INTO `countrylanguage` VALUES ('ABW','Dutch','T',5,3),('ABW','English','F',9,5),('ABW','Papiamento','F',76,7)...
40 984 row(s) affected Records: 984 Duplicates: 0 Warnings: 0
41 41 10:55:00 /*I40000 ALTER TABLE `countrylanguage` ENABLE KEYS */
42 42 10:55:00 UNLOCK TABLES
43 43 10:55:00 /*I40103 SET TIME_ZONE=@OLD_TIME_ZONE */
44 44 10:55:00 /*I40101 SET SQL_MODE=@OLD_SQL_MODE */
45 45 10:55:00 /*I40014 SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS */
46 46 10:55:00 /*I40014 SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS */
47 47 10:55:00 /*I40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */
48 48 10:55:00 /*I40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */
49 49 10:55:00 /*I40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */
50 50 10:55:00 /*I40111 SET SQL_NOTES=@OLD_SQL_NOTES */

Object Info Session
No object selected

```

Query Completed

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```

CREATE DATABASE IF NOT EXISTS `dbworld` /*!40100 DEFAULT CHARACTER SET utf8mb4 COLLATE utf8mb4_0900_ai_ci */;
USE `dbworld`;
-- MySQL dump 10.13 Distrib 5.7.17, for Win64 (x86_64)
--
-- Host: localhost Database: dbworld
--
-- Server version 8.0.11

/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!40101 SET NAMES utf8 */;
/*!40103 SET TIME_ZONE=@TIME_ZONE */;
/*!40103 SET TIME_ZONE='+00:00' */;
/*!40014 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
/*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0 */;

Action Output
Time Action Response
38 10:55:00 /*40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */
39 40 10:55:00 INSERT INTO `countrylanguage` VALUES ('ABW','Dutch','T',5,3),('ABW','English','F',9,5),('ABW','Papiamento','F',76,7)...
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41 41 10:55:00 /*I40000 ALTER TABLE `countrylanguage` ENABLE KEYS */
42 42 10:55:00 UNLOCK TABLES
43 43 10:55:00 /*I40103 SET TIME_ZONE=@OLD_TIME_ZONE */
44 44 10:55:00 /*I40101 SET SQL_MODE=@OLD_SQL_MODE */
45 45 10:55:00 /*I40014 SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS */
46 46 10:55:00 /*I40014 SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS */
47 47 10:55:00 /*I40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */
48 48 10:55:00 /*I40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */
49 49 10:55:00 /*I40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */
50 50 10:55:00 /*I40111 SET SQL_NOTES=@OLD_SQL_NOTES */

Object Info Session
No object selected

```

Query Completed

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The screenshot shows the MySQL Workbench interface with the 'Schemas' tab selected. A red box highlights the 'dbworld' schema in the tree view. The 'Tables' node under 'dbworld' is also highlighted. The 'Query 1' tab displays the SQL code for creating the database and its structure. The 'Action Output' pane shows the execution log with 984 rows affected.

```

1. CREATE DATABASE IF NOT EXISTS `dbworld` /*!40100 DEFAULT CHARACTER SET utf8mb4 COLLATE utf8mb4_0900_ai_ci */;
2. USE `dbworld`;
3. -- MySQL dump 10.13 Distrib 5.7.17, for Win64 (x86_64)
4. --
5. -- Host: localhost Database: dbworld
6. --
7. -- Server version 8.0.11
8.
9. /*!40101 SET @OLD_CHARACTER_SET_CLIENT=@CHARACTER_SET_CLIENT */;
10. /*!40101 SET @OLD_CHARACTER_SET_RESULTS=@CHARACTER_SET_RESULTS */;
11. /*!40101 SET @OLD_COLLATION_CONNECTION=@COLLATION_CONNECTION */;
12. /*!40101 SET NAMES utf8 */;
13. /*!40103 SET @OLD_TIME_ZONE=@TIME_ZONE */;
14. /*!40103 SET TIME_ZONE='+00:00' */;
15. /*!40014 SET @OLD_UNIQUE_CHECKS=@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
16. /*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0 */;

```

Action	Time	Response
1.00:55:00		0 row(s) affected
40 10:55:00	INSERT INTO `countrylanguage` VALUES ('ABW','Dutch',T,5,3),('ABW','English',F,9,5),('ABW','Papiamento',F,76,7)...	984 row(s) affected Records: 984 Duplicates: 0 Warnings: 0
41 10:55:00	'/I40000 ALTER TABLE `countrylanguage` ENABLE KEYS'	0 row(s) affected
42 10:55:00	UNLOCK TABLES	0 row(s) affected
43 10:55:00	'/I40103 SET TIME_ZONE=@OLD_TIME_ZONE'	0 row(s) affected
44 10:55:00	'/I40101 SET SQL_MODE=@OLD_SQL_MODE'	0 row(s) affected
45 10:55:00	'/I40014 SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS'	0 row(s) affected
46 10:55:00	'/I40014 SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS'	0 row(s) affected
47 10:55:00	'/I40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT'	0 row(s) affected
48 10:55:00	'/I40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS'	0 row(s) affected
49 10:55:00	'/I40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION'	0 row(s) affected
50 10:55:00	'/I40111 SET SQL_NOTES=@OLD_SQL_NOTES'	0 row(s) affected

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This screenshot is nearly identical to the one above, showing the creation of the 'dbworld' schema and its tables. The 'dbworld' schema is highlighted in the tree view. The 'Tables' node under 'dbworld' is also highlighted. The 'Query 1' tab displays the same SQL code. The 'Action Output' pane shows the execution log with 984 rows affected.

```

1. CREATE DATABASE IF NOT EXISTS `dbworld` /*!40100 DEFAULT CHARACTER SET utf8mb4 COLLATE utf8mb4_0900_ai_ci */;
2. USE `dbworld`;
3. -- MySQL dump 10.13 Distrib 5.7.17, for Win64 (x86_64)
4. --
5. -- Host: localhost Database: dbworld
6. --
7. -- Server version 8.0.11
8.
9. /*!40101 SET @OLD_CHARACTER_SET_CLIENT=@CHARACTER_SET_CLIENT */;
10. /*!40101 SET @OLD_CHARACTER_SET_RESULTS=@CHARACTER_SET_RESULTS */;
11. /*!40101 SET @OLD_COLLATION_CONNECTION=@COLLATION_CONNECTION */;
12. /*!40101 SET NAMES utf8 */;
13. /*!40103 SET @OLD_TIME_ZONE=@TIME_ZONE */;
14. /*!40103 SET TIME_ZONE='+00:00' */;
15. /*!40014 SET @OLD_UNIQUE_CHECKS=@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
16. /*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0 */;

```

Action	Time	Response
1.00:55:00		0 row(s) affected
40 10:55:00	INSERT INTO `countrylanguage` VALUES ('ABW','Dutch',T,5,3),('ABW','English',F,9,5),('ABW','Papiamento',F,76,7)...	984 row(s) affected Records: 984 Duplicates: 0 Warnings: 0
41 10:55:00	'/I40000 ALTER TABLE `countrylanguage` ENABLE KEYS'	0 row(s) affected
42 10:55:00	UNLOCK TABLES	0 row(s) affected
43 10:55:00	'/I40103 SET TIME_ZONE=@OLD_TIME_ZONE'	0 row(s) affected
44 10:55:00	'/I40101 SET SQL_MODE=@OLD_SQL_MODE'	0 row(s) affected
45 10:55:00	'/I40014 SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS'	0 row(s) affected
46 10:55:00	'/I40014 SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS'	0 row(s) affected
47 10:55:00	'/I40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT'	0 row(s) affected
48 10:55:00	'/I40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS'	0 row(s) affected
49 10:55:00	'/I40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION'	0 row(s) affected
50 10:55:00	'/I40111 SET SQL_NOTES=@OLD_SQL_NOTES'	0 row(s) affected

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SQL Level 1 Exercise

1. Get all the cities of Thailand.



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The screenshot shows the MySQL Workbench interface with the following details:

- Query Editor:** Displays the SQL command: `SELECT * FROM dbworld.city;`
- Result Grid:** Shows the data from the dbworld.city table, which includes columns: ID, Name, CountryCode, District, and Population. The data is as follows:

ID	Name	CountryCode	District	Population
1	Kabul	AFG	Kabul	1780000
2	Gandahar	AFG	Gandahar	237500
3	Herat	AFG	Herat	186800
4	Mazar-e-Sharif	AFG	Balkh	127800
5	Amsterdam	NLD	Noord-Holland	731200
6	Rotterdam	NLD	Zuid-Holland	593321
7	Haag	NLD	Zuid-Holland	440900
8	Utrecht	NLD	Utrecht	234323
9	Eindhoven	NLD	Noord-Brabant	201843

- Action Output:** Shows the history of database operations, including the execution of the ALTER TABLE command to enable keys on the countrylanguage table and various SET commands to restore session variables to their original values.
- Status:** At the bottom left, it says "No object selected". At the bottom right, it says "Query Completed".

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Local instance MySQL80

Administration Schemas Query 1 city

SCHEMAS Filter objects

dbworld

Tables city country countrylanguage Views Stored Procedures Functions sys

1 • SELECT * FROM dbworld.city

Result Grid Filter Rows: 100% 1:1

ID	Name	CountryCode
1	Kabul	AFG
2	Gandahar	AFG
3	Herat	AFG
4	Mazar-e-Sharif	AFG
5	Amsterdam	NLD
6	Rotterdam	NLD
7	Haag	NLD
8	Utrecht	NLD
9	Eindhoven	NLD

Action Output

Time	Action
41	10:55:00 /'I40000 AL'
42	10:55:00 UNLOCK TABLES
43	10:55:00 /*I40103 SET
44	10:55:00 /*I40101 SET
45	10:55:00 /*I40014 SET
46	10:55:00 /*I40014 SET
47	10:55:00 /*I40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */
48	10:55:00 /*I40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */
49	10:55:00 /*I40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */
50	10:55:00 /*I40111 SET SQL_NOTES=@OLD_SQL_NOTES */
51	11:39:37 SELECT * FROM dbworld.city

No object selected

Object Info Session

Query Completed

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Local instance MySQL80

Administration Schemas Query 1 city

SCHEMAS Filter objects

dbworld

Tables city country countrylanguage Views Stored Procedures Functions sys

1 • SELECT * FROM dbworld.city;

Result Grid Filter Rows: 100% 1:1

ID	Name	CountryCode	District	Population
1	Kabul	AFG	Kabul	1780000
2	Gandahar	AFG	Gandahar	237500
3	Herat	AFG	Herat	166800
4	Mazar-e-Sharif	AFG	Balkh	127800
5	Amsterdam	NLD	Noord-Holland	751200
6	Rotterdam	NLD	Zuid-Holland	593321
7	Haag	NLD	Zuid-Holland	449400
8	Utrecht	NLD	Utrecht	234928
9	Eindhoven	NLD	Noord-Brabant	201949
10	Tilburg	NLD	Noord-Brabant	193238
11	Groningen	NLD	Groningen	172701
12	Breda	NLD	Noord-Brabant	160398
13	Apeldoorn	NLD	Gelderland	153491
14	Nijmegen	NLD	Gelderland	152463
15	Enschede	NLD	Overijssel	149544
16	Haarlem	NLD	Noord-Holland	148772
17	Almere	NLD	Flevoland	142465
18	Arnhem	NLD	Gelderland	138020
19	Zaanstad	NLD	Noord-Holland	135621
20	Â's-Hertogen...	NLD	Noord-Brabant	129170
21	Amersfoort	NLD	Utrecht	126270
22	Maastricht	NLD	Limburg	122087
23	Dordrecht	NLD	Zuid-Holland	119811
24	Leiden	NLD	Zuid-Holland	117196
25	Haallemmer...	NLD	Noord-Holland	110722

No object selected

Object Info Session

Query Completed

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The screenshot shows the MySQL Workbench interface with the following details:

- Left Panel (Schema Tree):** Shows the 'dbworld' schema with tables: city, country, countrylanguage, Views, Stored Procedures, Functions, and sys.
- Top Bar:** Local instance MySQL80, Administration, Schemas, Query 1, city, Filter objects: bangkok, Don't Limit.
- Result Grid:** Shows the output of the query: 'SELECT * FROM dbworld.city;'. The result contains one row for Bangkok:

ID	Name	CountryCode	District	Population
3320	Bangkok	THA	Bangkok	6320174
- Right Panel (Toolbars):** Result Grid, Form Editor, Field Types, Query Stats, Execution Plan.
- Bottom Status:** Query Completed.

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The screenshot shows the MySQL Workbench interface with the following details:

- Left Panel (Schema Tree):** Shows the 'dbworld' schema with tables: city, country, countrylanguage, Views, Stored Procedures, Functions, and sys.
- Top Bar:** Local instance MySQL80, Administration, Schemas, Query 1, country, Filter objects: Search, Don't Limit.
- Result Grid:** Shows the output of the query: 'SELECT * FROM dbworld.country;'. The result contains many rows of country information:

Code	Name	Continent	Region	SurfaceArea	IndepYear	Population	LifeExpectancy	GNP	GNPOld	LocalName	GovernmentForm
ABW	Aruba	North America	Caribbean	193.00		1030000	78.4	828.00	793.00	Aruba	Nonmetropolitan Territory
AFG	Afghanistan	Asia	Southern and Central Asia	652090.00	1919	2270000	45.9	5976.00		Afghanistan/Afghanistan	Islamic Emirate
AGO	Angola	Africa	Central Africa	1246700.00	1975	12878000	38.3	6648.00	7984.00	Angola	Republic
AIA	Anguilla	North America	Caribbean	96.00		8000	76.1	65.20		Anguilla	Dependent Territory of the United Kingdom
ALB	Albania	Europe	Southern Europe	28505.00	1912	3401500	71.6	5200.00	2500.00	Shqipëria	Republic
AND	Andorra	Europe	Southern Europe	468.00	1278	79000	83.5	1580.00		Andorra	Principality of Andorra
ANT	Netherlands Antilles	North America	Caribbean	800.00		217000	74.7	1941.00		Nederlandse Antillen	Partially dependent territory of the Netherlands
ARE	United Arab Emirates	Asia	Middle East	83800.00	1971	5441000	74.1	37966.00	36846.00	Al-Imarat al-Àrabiyah al-Muttaahida	Emirate Federation
ARG	Argentina	South America	South America	2789400.00	1816	57032000	75.1	342238.00	32310.00	Argentina	Federal Republic
ARM	Armenia	Asia	Middle East	28900.00	1991	3520000	66.4	1813.00	1627.00	Hajastan	Republic
ASM	American Samoa	Oceania	Polynesia	199.00		68000	75.1	334.00		Amerika Samoa	US Territory
ATA	Antarctica	Antarctica	Antarctica	13120000.00		0		0.00		A-	Co-administrated by Chile and Argentina
ATF	French Southern territories	Antarctica	Antarctica	7780.00		0		0.00		Terres australes et antarctiques françaises	Nonmetropolitan Territory
ATG	Antigua and Barbuda	North America	Caribbean	442.00	1981	68000	70.5	612.00	584.00	Antigua and Barbuda	Constitutional Monarchy
AUS	Australia	Oceania	Australia and New Zealand	7741220.00	1901	18860000	79.8	351182.00	392911.00	Australia	Constitutional Monarchy
AUT	Austria	Europe	Western Europe	83859.00	1918	8091800	77.7	211860.00	206025.00	À-sterreich	Federal Republic
AZE	Azerbaijan	Asia	Middle East	86600.00	1991	7734000	62.9	4127.00	4100.00	AzÄrbaycan	Federal Republic
BDI	Burundi	Africa	Eastern Africa	27834.00	1962	6695000	46.2	903.00	982.00	Burundi/Burundi	Republic
BEL	Belgium	Europe	Western Europe	30518.00	1830	10239000	77.8	249704.00	243948.00	België/Belgique	Constitutional Monarchy
BEN	Benin	Africa	Western Africa	112622.00	1960	6097000	50.2	2357.00	2141.00	BÃénin	Republic
BFA	Burkina Faso	Africa	Western Africa	274000.00	1960	11937000	46.7	2425.00	2201.00	Burkina Faso	Republic
BGD	Bangladesh	Asia	Southern and Central Asia	143988.00	1971	129155000	60.2	32652.00	31966.00	Bangladesh	Republic
BGR	Bulgaria	Europe	Eastern Europe	110994.00	1908	8109000	70.9	12178.00	10169.00	Balgarija	Republic
BHR	Bahrain	Asia	Middle East	694.00	1971	617000	73.0	6366.00	6097.00	Al-Bahrayn	Monarchy (Emirate)
BHS	Bahamas	North America	Caribbean	13878.00	1973	307000	71.1	3527.00	3347.00	The Bahamas	Constitutional Monarchy
- Right Panel (Toolbars):** Result Grid, Form Editor, Field Types, Query Stats, Execution Plan.
- Bottom Status:** Query Completed.

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The screenshot shows the MySQL Workbench interface. On the left, the 'Schemas' tree view is expanded to show the 'dbworld' schema, which contains tables like 'city', 'country', and 'countrylanguage'. A query editor at the top has the SQL command: 'SELECT * FROM dbworld.country;'. Below it, the 'Result Grid' displays data for Thailand. The columns are: Code, Name, Continent, Region, SurfaceArea, IndepYear, Population, LifeExpectancy, GNP, GNPOld, LocalName, and GovernmentForm. The data for Thailand is: THA, Thailand, Asia, Southeast Asia, 513115.00, 1350, 61399000, 68.6, 116416.00, 153907.00, Prathet Thai, Constitutional Monarchy. The 'Filter Rows' field contains 'thai'. The right side of the interface includes various toolbars and panels for editing, exporting, and managing data.

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SQL Level 1 Exercise

1. Get all the cities of Thailand.

```
SELECT      *
FROM        city
WHERE       countrycode = 'THA';
```



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SQL Level 1 Exercise

2. Get all the cities of Thailand with a population of more than 100,000.



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SQL Level 1 Exercise

2. Get all the cities of Thailand **with a population of more than 100,000.**

```
SELECT      *
FROM        city
WHERE       countrycode = 'THA';
```



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SQL Level 1 Exercise

2. Get all the cities of Thailand **with a population of more than 100,000.**

```
SELECT      *
FROM        city
WHERE       countrycode = 'THA' AND
population > 100000;
```



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SQL Level 1 Exercise

2. Get all the cities of Thailand **with a population of more than 100,000.**

```
SELECT      *
FROM        city
WHERE       10000 < population AND
countrycode = 'THA';
```



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#	ID	Name	CountryCode	District	Population
1	3320	Bangkok	THA	Bangkok	6320174
2	3321	Nonthaburi	THA	Nonthaburi	292100
3	3322	Nakhon Ratchasima	THA	Nakhon Ratchasima	181400
4	3323	Chiang Mai	THA	Chiang Mai	171100
5	3324	Udon Thani	THA	Udon Thani	158100
6	3325	Hat Yai	THA	Songkhla	148632
7	3326	Khon Kaen	THA	Khon Kaen	126500
8	3327	Pak Kret	THA	Nonthaburi	126055
9	3328	Nakhon Sawan	THA	Nakhon Sawan	123800
10	3329	Ubon Ratchathani	THA	Ubon Ratchathani	116300
*	NULL	NULL	NULL	NULL	NULL

Returns 10 Rows

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SQL Level 1 Exercise

3. Get all the countries with a life expectancy of 70 to 80 years old.

```
SELECT      *
FROM        country
WHERE       lifeexpectancy >= 70 AND
           lifeexpectancy <= 80;
```



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#	Code	Name	Continent	Region	SurfaceArea	IndepYear	Population	LifeExpectancy
1	ABW	Aruba	North America	Caribbean	193.00	NULL	103000	78.4
2	AIA	Anguilla	North America	Caribbean	96.00	NULL	8000	76.1
3	ALB	Albania	Europe	Southern Europe	28748.00	1912	3401200	71.6
4	ANT	Netherlands Antilles	North America	Caribbean	800.00	NULL	217000	74.7
5	ARE	United Arab Emirates	Asia	Middle East	83600.00	1971	2441000	74.1
6	ARG	Argentina	South America	South America	2780400.00	1816	37032000	75.1
7	ASM	American Samoa	Oceania	Polynesia	199.00	NULL	68000	75.1
8	ATG	Antigua and Barbuda	North America	Caribbean	442.00	1981	68000	70.5
9	AUS	Australia	Oceania	Australia and New Zealand	7741220.00	1901	18886000	79.8
10	AUT	Austria	Europe	Western Europe	83859.00	1918	8091800	77.7
11	BEL	Belgium	Europe	Western Europe	30518.00	1830	10239000	77.8
12	BGR	Bulgaria	Europe	Eastern Europe	110994.00	1908	8190900	70.9
13	BHR	Bahrain	Asia	Middle East	694.00	1971	617000	73.0
14	BHS	Bahamas	North America	Caribbean	13878.00	1973	307000	71.1
15	BIH	Bosnia and Herzeg...	Europe	Southern Europe	51197.00	1992	3972000	71.5

Returns 107 Rows

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SQL Level 1 Exercise

- Get all the countries with a life expectancy of 70 to 80 years old.

```
SELECT      *
FROM        country
WHERE       lifeexpectancy BETWEEN 70 AND 80;
```



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SQL Level 1 Exercise

4. Get all the continents with countries having a population below 1,000.

```
SELECT    continent
FROM      country
WHERE     population < 1000;
```



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#	continent
1	Antarctica
2	Antarctica
3	Antarctica
4	Oceania
5	Antarctica
6	Africa
7	Oceania
8	Antarctica
9	Oceania

Returns 9 Rows

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15

SQL Level 1 Exercise

- Get all the continents with countries having a population below 1,000.

```
SELECT DISTINCT continent  
FROM country  
WHERE population < 1000;
```



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#	continent
1	Antarctica
2	Oceania
3	Africa

Returns 3 Rows

41

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SQL Level 1 Exercise

5. Get all the countries (name, continent, governmentform) that are Republics.

```
SELECT      name, continent, governmentform  
FROM        country  
WHERE       governmentform LIKE '%Republic%';
```



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#	name	continent	governmentform
1	Angola	Africa	Republic
2	Albania	Europe	Republic
3	Argentina	South America	Federal Republic
4	Armenia	Asia	Republic
5	Austria	Europe	Federal Republic
6	Azerbaijan	Asia	Federal Republic
7	Burundi	Africa	Republic
8	Benin	Africa	Republic
9	Burkina Faso	Africa	Republic
10	Bangladesh	Asia	Republic
11	Bulgaria	Europe	Republic
12	Bosnia and...	Europe	Federal Republic
13	Belarus	Europe	Republic
14	Bolivia	South America	Republic
15	Brazil	South America	Federal Republic

Returns 143 Rows

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SQL Level 1 Exercise

6. Get all the countries that has celebrated at least 100 years of independence.



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DBworld

Tables

city

country

Columns

- ◆ Code
- ◆ Name
- ◆ Continent
- ◆ Region
- ◆ SurfaceArea
- ◆ IndepYear
- ◆ Population
- ◆ LifeExpectancy
- ◆ GNP
- ◆ GNPOld
- ◆ LocalName
- ◆ GovernmentForm
- ◆ HeadOfState
- ◆ Capital
- ◆ Code2

Date Today – Year of Independence
 ≥ 100

46

SQL Level 1 Exercise

6. Get all the countries that has celebrated at least 100 years of independence.

```
SELECT      name, indepyear  
FROM        country  
WHERE       YEAR(NOW())-indepyear >= 100;
```



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#	name	indepyear
1	Afghanistan	1919
2	Albania	1912
3	Andorra	1278
4	Argentina	1816
5	Australia	1901
6	Austria	1918
7	Belgium	1830
8	Bulgaria	1908
9	Bolivia	1825
10	Brazil	1822
11	Bhutan	1910
12	Canada	1867
13	Switzerland	1499
14	Chile	1810
15	China	-1523

Returns 62 Rows

48

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SQL Level 1 Exercise

- Get all the countries that has celebrated at least 100 years of independence.

```
SELECT      name, indepyear,  
YEAR(NOW())-indepyear AS yearsindependent  
FROM        country  
WHERE       YEAR(NOW())-indepyear >= 100;
```



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#	name	indepyear	yearsindependent
1	Afghanistan	1919	102
2	Albania	1912	109
3	Andorra	1278	743
4	Argentina	1816	205
5	Australia	1901	120
6	Austria	1918	103
7	Belgium	1830	191
8	Bulgaria	1908	113
9	Bolivia	1825	196
10	Brazil	1822	199
11	Bhutan	1910	111
12	Canada	1867	154
13	Switzerland	1499	522
14	Chile	1810	211
15	China	-1523	3544

Returns 62 Rows

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SQL Level 1 Exercise

- Get all the districts of Bangladesh.



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#	Code	Name	Continent	Region	SurfaceArea	IndepYear	Population
22	BGD	Bangladesh	Asia	Southern and Central Asia	143998.00	1971	129155
23	BGR	Bulgaria	Europe	Eastern Europe	110994.00	1908	8190900
24	BHR	Bahrain	Asia	Middle East	694.00	1971	617000
25	BHS	Bahamas	North America	Caribbean	13878.00	1973	307000
26	BIH	Bosnia and Herzeg...	Europe	Southern Europe	51197.00	1992	3972000
27	BLR	Belarus	Europe	Eastern Europe	207600.00	1991	1023600
28	BLZ	Belize	North America	Central America	22696.00	1981	241000
29	BMU	Bermuda	North America	North America	53.00	NULL	65000
30	BOL	Bolivia	South America	South America	1098581.00	1825	8329000
31	BRA	Brazil	South America	South America	8547403.00	1822	1701150
32	BRB	Barbados	North America	Caribbean	430.00	1966	270000
33	BRN	Brunei	Asia	Southeast Asia	5765.00	1984	328000
34	BTN	Bhutan	Asia	Southern and Central Asia	47000.00	1910	2124000
35	BVT	Bouvet Island	Antarctica	Antarctica	59.00	NULL	0
36	BWA	Botswana	Africa	Southern Africa	581730.00	1966	1622000

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SQL Level 1 Exercise

7. Get all the districts of Bangladesh.

```
SELECT      district
FROM        city
WHERE       countrycode = 'BGD';
```



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#	district
1	Dhaka
2	Chittagong
3	Khulna
4	Rajshahi
5	Dhaka
6	Rajshahi
7	Dhaka
8	Barisal
9	Dhaka
10	Khulna
11	Chittagong
12	Rajshahi
13	Rajshahi
14	Rajshahi
15	Sylhet

Returns 24 Rows

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#	district
1	Dhaka
2	Chittagong
3	Khulna
4	Rajshahi
5	Dhaka
6	Rajshahi
7	Dhaka
8	Barisal
9	Dhaka
10	Khulna
11	Chittagong
12	Rajshahi
13	Rajshahi
14	Rajshahi
15	Sylhet

Returns 24 Rows

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SQL Level 1 Exercise

7. Get all the districts of Bangladesh.

```
SELECT DISTINCT district
FROM city
WHERE countrycode = 'BGD';
```



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#	district
1	Dhaka
2	Chittagong
3	Khulna
4	Rajshahi
5	Barisal
6	Sylhet

Returns 6 Rows

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SQL Level 1 Exercise

8. Get all the countries where more than 80% speak Arabic.

```
SELECT      countrycode, percentage  
FROM        countrylanguage  
WHERE       language = 'Arabic' AND percentage > 80;
```



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#	countrycode	percentage
1	DZA	86.0
2	EGY	98.8
3	ESH	100.0
4	JOR	97.9
5	LBN	93.0
6	LBY	96.0
7	PSE	95.9
8	SAU	95.0
9	SYR	90.0
10	YEM	99.6

Returns 10 Rows

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**How can we
make the
result better?**

#	countrycode	percentage
1	DZA	86.0
2	EGY	98.8
3	ESH	100.0
4	JOR	97.9
5	LBN	93.0
6	LBY	96.0
7	PSE	95.9
8	SAU	95.0
9	SYR	90.0
10	YEM	99.6



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SQL Level 1 Exercise

- Get all the countries where more than 80% speak Arabic.

```
SELECT      c.name, cl.countrycode, cl.percentage  
FROM        countrylanguage cl  
JOIN        country c ON cl.countrycode = c.code  
WHERE       cl.language = 'Arabic' AND cl.percentage > 80;
```



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SQL Level 1 Exercise

- Get all the countries where more than 80% speaks Arabic.

```
SELECT      c.name, cl.countrycode, cl.percentage  
FROM        countrylanguage cl  
JOIN        country c ON cl.countrycode = c.code  
WHERE       cl.language = 'Arabic' AND cl.percentage > 80;
```



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#	name	countrycode	percentage
1	Algeria	DZA	86.0
2	Egypt	EGY	98.8
3	Western Sahara	ESH	100.0
4	Jordan	JOR	97.9
5	Lebanon	LBN	93.0
6	Libyan Arab Jamahiriya	LYB	96.0
7	Palestine	PSE	95.9
8	Saudi Arabia	SAU	95.0
9	Syria	SYR	90.0
10	Yemen	YEM	99.6

Returns 10 Rows

63

References

- ▶ Connolly, T. & Begg, C. (2015). *Database Systems: A Practical Approach to Design, Implementation, and Management, 6th Ed.* Harlow, Essex: Addison-Wesley [QA 76.9.VD26 C66 2015]
- ▶ MySQL Workbench Manual
<https://dev.mysql.com/doc/workbench/en/wb-sql-editor.html>



Questions?

PLEASE POST YOUR QUESTIONS IN THE DISCUSSION BOARD CREATED FOR THIS TOPIC.



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CCINFOM

Thank you &
keep safe.

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