



Creating a database

The SQL query to create a brand new database uses the SQL keywords **CREATE DATABASE** followed by your choice of name for that database, like this:

```
CREATE DATABASE database-name ;
```

So the SQL queries in the screenshots below create a new database called “library” – then confirm its existence:

```

mysql> CREATE DATABASE library ;
Query OK, 1 row affected (0.20 sec)

mysql> SHOW DATABASES ;
+-----+
| Database |
+-----+
| information_schema |
| library       |
| mysql         |
| performance_schema |
| sys          |
+-----+
5 rows in set (0.00 sec)

mysql>

```



Database names may contain letters, digits, and the underscore character – but they should not contain spaces or any other characters.

```

mysql> CREATE DATABASE library ;
Query OK, 1 row affected (0.20 sec)

mysql> SHOW DATABASES ;
+-----+
| Database |
+-----+
| information_schema |
| library       |
| mysql         |
| performance_schema |
| sys          |
+-----+
5 rows in set (0.01 sec)

mysql>

```

...cont'd

If an SQL query attempts to create a new database with the name of an existing database, an error is reported. This can be avoided by qualifying the SQL query with the keywords **IF NOT EXISTS** so that it first checks to see if a database of that name already exists:

```
CREATE DATABASE IF NOT EXISTS database-name ;
```

In the screenshot below, the first SQL query attempts to create a new database called “library”, which was already created in the previous example – so an error message is generated.

The second query is qualified to check that no database of that name already exists – so no error is generated.

In each case, no new database is created and the existing “library” database is unaffected by these queries:

```
mysql> CREATE DATABASE library ;
ERROR 1007 (HY000): Can't create database 'library'; database exists

mysql> CREATE DATABASE IF NOT EXISTS library ;
Query OK, 1 row affected, 1 warning (0.07 sec)

mysql> SHOW DATABASES ;
+-----+
| Database |
+-----+
| information_schema |
| library          |
| mysql           |
| performance_schema |
| sys             |
+-----+
5 rows in set (0.00 sec)

mysql> _
```

In MySQL, database names are case-sensitive on operating systems that have case-sensitive file names, such as Linux. So MySQL on Linux regards databases “LIBRARY” and “library” as two different databases. Windows, however, makes no case-sensitive distinction, so would regard “LIBRARY” and “library” as the same database.



Use only lowercase characters for all database names to avoid any confusion of case-sensitivity.