

# SQL Crash Course with Lego Data

## #1 | Create a Database

Create a Lego Database in MySQL.

## #2 | Create a Lego Sets Table

Create a Lego Sets Table in MySQL which has the following columns,

Field	Description
id	An Integer that is Primary Key and Auto Increments
release_date	A Date that cannot be NULL
model_name	A String
total_pieces	An Integer
theme	A String

## #3 | Update Table for “model\_name” to be Not Null

Update the Table schema so that,

- The “model\_name” column does NOT accept null values
- Add a new column for “Availability” as a string

## #4 | Insert Data Into Lego Sets Table

Insert the following record into the Lego Sets Table.

id	release_date	model_name	total_pieces	theme
1	2008-2-14	Lego Creator Taj Mahal	5923	Architecture

## #5 | Insert Multiple Records Into Lego Sets Table

Insert the following record(s) into the Lego Sets Table.

release_date	model_name	total_pieces	theme
2020-08-21	Lego Iron Man Helmet	480	Marvel
2008-2-14	Lego Old Trafford - Manchester United	3898	Creator
2020-02-1	Lego Dinosaur Fossils	910	Ideas

## #6 | Insert Specific Columns Into Lego Sets Table

Insert the following record(s) into the Lego Sets Table.

release_date	model_name	theme
2021-11-08	Lego Titanic	Creator
2020-11-27	Lego Colosseum	Creator

## #7 | Delete from Lego Sets Table

Delete all records from the Lego Sets table with the theme as “Marvel”.

## #8 | Update Null records in Lego Sets Table

Update all records where total\_pieces are NULL.

- Lego Titanic - 9090 pieces
- Lego Colosseum - 9036 pieces

Update the “availability” column to be “Retail” for all sets.

## #9 | Retrieve all data from Lego Sets Table

Write a query to retrieve all the available data from the Lego Sets Table.

## #10 | Retrieve specific columns with aliases from Lego Sets Table

Write a query to retrieve all lego sets data with,

- Only the model\_name, total\_pieces and theme columns
- With column aliases as,
  - model\_name as Model Name
  - total\_pieces as Total Pieces
  - theme as Theme
- Theme column as ALL CAPS

## #11 | Retrieve from Lego Sets Table based on conditions

Write a query to retrieve,

- All the Lego sets which have more than 5000 pieces

Write a query to retrieve,

- All Lego sets which were released after 2020 and,
- Are from the "Creator" theme

Write a query to retrieve,

- All Lego Sets where the model name that contains a 'm'

Write a query to retrieve,

- All Lego sets that were released between 2020 and today

Write a query to retrieve,

- All Lego sets that have less than 4000 pieces
- (or) are have more than 9000 pieces

Write a query to retrieve,

- All Lego sets except for those from “Creator” and “Duplo” themes

Write a query to retrieve,

- The three most recent Lego sets by release\_date

Write a query to retrieve,

- All the lego sets by theme showing average pieces, maximum pieces and minimum pieces by theme

Write a query to retrieve,

- All the lego sets by theme which have more than 1 set in the theme

Write a query to retrieve,

- All the lego sets grouped by theme and ordered by total pieces

## #12 | Delete the Lego Sets Table

Delete the Lego Sets table from the database.