**Project Resource**[Welcome to SQL (Khan Academy)](https://www.khanacademy.org/computing/hour-of-code/hour-of-sql/v/welcome-to-sql)

* Introduction to SQL basic commands - CREATE, INSERT, SELECT

[Android Storage Options](https://developer.android.com/guide/topics/data/data-storage.html)

* Overview of Data Storage in Android. This project will focus on the "SQLite Databases" option.

[Saving Data in SQL Database in Android](https://developer.android.com/training/basics/data-storage/databases.html)

* Covers how to execute these concepts in an Android app:
  + Create a SQLite table in your app
  + Populating that table with new entries
  + Modifying the entries
  + Displaying the contents of the table to users.

[SQLite Datatypes](https://www.sqlite.org/datatype3.html)

* Understand the available SQLite datatypes

*The last four resources below cover these topics:*

* Storing information in a SQLite database
* Integrating Android’s file storage systems into that database
* Presenting information from files and SQLite databases to users
* Updating information based on user input.
* Creating intents to other apps using stored information.

[How to Use a Content Provider](https://www.udacity.com/course/viewer#!/c-ud258/l-3372188753/m-3432888624)

[Creating a Content Provider](https://developer.android.com/guide/topics/providers/content-provider-creating.html#ContentURI)

[Designing Content URIs](https://developer.android.com/guide/topics/providers/content-provider-creating.html#ContentURI)

[Running a Query with a Cursor Loader](https://developer.android.com/training/load-data-background/setup-loader.html)

**Step 1  
  
Project Overview**

This project is a chance for you to combine and practice everything you learned in this section of the Nanodegree program. You'll be setting up and using the database schema for a simple habit tracking app.

The goal is to design and create the structure of a Habit Tracking app which would allow a user to store and track their habits over time. *This project will not have any UI components*; instead, you will focus on what happens behind the scenes, practicing how to design and implement a simple database.

**Why this project?**

In the most recent portion of the Nanodegree program, you learned about data storage in a SQLite database on Android. This is critical if you want to make any app that persists a user’s data over time or syncs with an online database for offline use.

**What will I learn?**

This project is about combining various ideas and skills we’ve been practicing throughout the course. They include:

* Creating a SQLite table in your app
* Populating that table with new entries
* Modifying the entries
* Displaying the contents of the table to users.

**Subscription vs Free-Version student**

If you are subscribed to the paid Nanodegree program, coaches will be available in the Coaches Lounge to help guide you through the final project. You will receive feedback after submitting your project and a verified certificate after successfully finishing this project.

If you are enrolled in the free version of this course, the project rubric and all of the project details are available to you.

Either way, we would love to see a description and link to your app on the discussion forum.

**Step 2:**

**Build Your Project**

For this project, you’ll be setting up and using the database schema for a simple habit tracking app.*This project will not have any UI components*; instead, you will focus on what happens behind the scenes, practicing how to design and implement a simple database.

First, define and setup up the database schema (i.e. table and columns) that can be used to help a user keep track of their habits (e.g. walking the dog, practicing the saxophone, taking any medications). Then, create 4 methods that insert, read, update, and delete from your database. These 4 methods can all be contained in a single Java file.

Your project will be evaluated using the [Habit Tracker project rubric](https://review.udacity.com/#!/rubrics/162/view).

**Additional Criteria**

The intent of this project is to give you practice writing raw Java code using the necessary classes provided by the Android framework; therefore, the use of external libraries will not be permitted to complete this project.

**Step 3:**

**Prepare for Submission**

**Clean Your Build**

Before submitting, please follow the instructions for cleaning your project files. This removes some temporary files and greatly decreases the size of your project.

[Cleaning your project files](https://d17h27t6h515a5.cloudfront.net/topher/2016/June/5769c116_1000-files-tutorial/1000-files-tutorial.pdf)

**Review the Project Rubric**

Udacity reviewers will be reviewing your project based on the project rubric. All specifications must be met to pass the project.

[Project review Rubric](https://review.udacity.com/?_ga=1.192930922.1362034947.1463828731#!/rubrics/162/view)

**Final Submission Checklist**

Before submitting your project for evaluation, we recommend that you check that each of the following is true:

1. Your app compiles and runs as expected.
2. You are proud of your app and its output.
3. You completed this project according to instructions.
4. You cleaned the project using the instructions above.
5. You checked your project against the rubric.

**Zip your Project for Submission**

Be sure to zip your whole android project only after you have cleaned it.