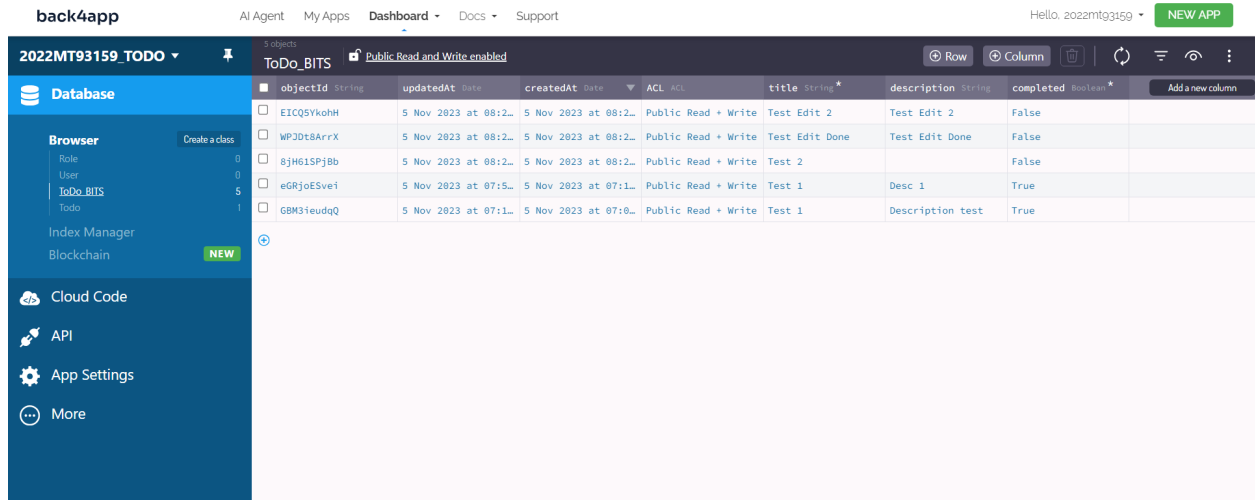


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Assignment Title: Flutter App with Back4App Integration

Step 1: Set Up Back4App



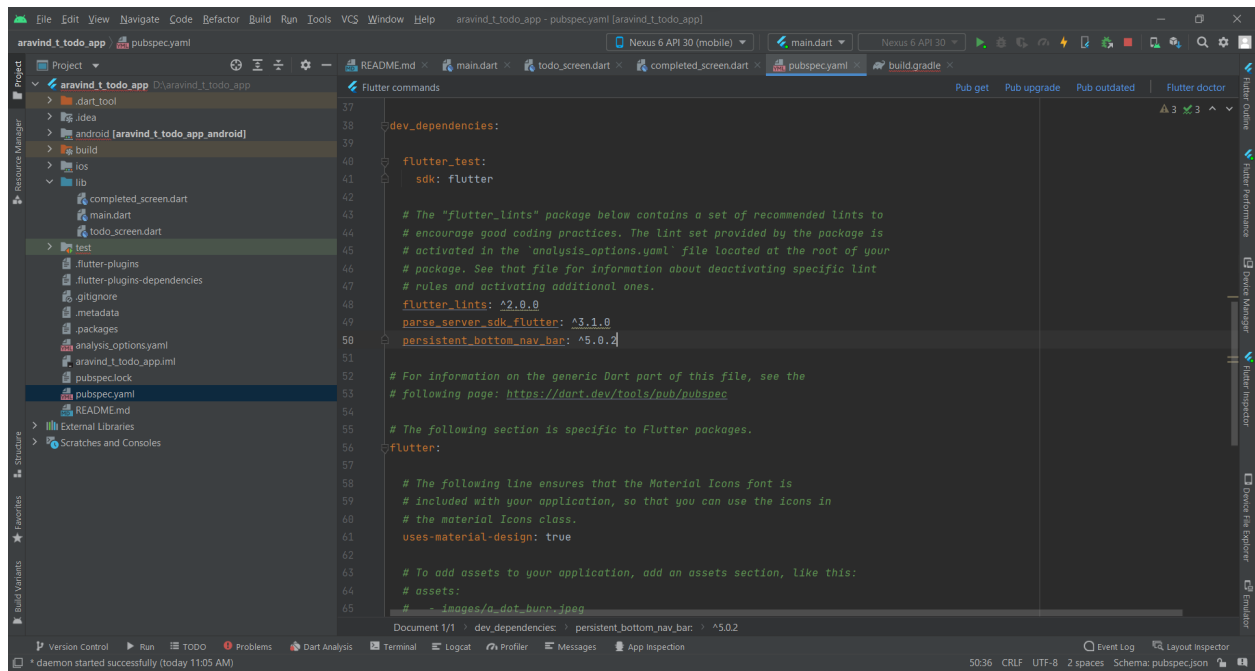
The screenshot shows the Back4App dashboard interface. At the top, there's a navigation bar with 'back4app', 'AI Agent', 'My Apps', 'Dashboard', 'Docs', and 'Support'. A user greeting 'Hello, 2022mt93159' and a 'NEW APP' button are on the right. The main content area displays a table of objects for the 'ToDo_BITS' class. The table has columns for 'objectId', 'updatedAt', 'createdAt', 'ACL', 'title', 'description', and 'completed'. There are 5 objects listed.

| objectId | updatedAt | createdAt | ACL | title | description | completed |
|------------|------------------------|-----------------------|---------------------|----------------|------------------|-----------|
| EICQSYkoH | 5 Nov 2023 at 08:2... | 5 Nov 2023 at 08:2... | Public Read + Write | Test Edit 2 | Test Edit 2 | False |
| WPJDT8ArrX | 5 Nov 2023 at 08:2... | 5 Nov 2023 at 08:2... | Public Read + Write | Test Edit Done | Test Edit Done | False |
| 8jH61SPjBb | 5 Nov 2023 at 08:2... | 5 Nov 2023 at 08:2... | Public Read + Write | Test 2 | | False |
| eGRjoESve1 | 5 Nov 2023 at 07:15... | 5 Nov 2023 at 07:1... | Public Read + Write | Test 1 | Desc 1 | True |
| 6BM3ieudQ | 5 Nov 2023 at 07:1... | 5 Nov 2023 at 07:0... | Public Read + Write | Test 1 | Description test | True |

Class name: ToDo_BITS

Columns: title<String>, description<String>, completed<Boolean>

Step 2: Flutter Setup



The screenshot shows an IDE window with the 'pubspec.yaml' file open. The file contains configuration for a Flutter app, including dependencies, linting rules, and asset management. The 'dev_dependencies' section includes 'flutter_test' and 'flutter_lints'. The 'flutter' section includes 'uses-material-design: true' and an 'assets' section for 'images/a_dot_burn.jpeg'.

```
dev_dependencies:
  flutter_test:
    sdk: flutter

# The "flutter_lints" package below contains a set of recommended lints to
# encourage good coding practices. The lint set provided by the package is
# activated in the 'analysis_options.yaml' file located at the root of your
# package. See that file for information about deactivating specific lint
# rules and activating additional ones.
flutter_lints: ^2.0.0
parse_server_sdk_flutter: ^3.1.0
persistent_bottom_nav_bar: ^5.0.2

# For information on the generic Dart part of this file, see the
# following page: https://dart.dev/tools/pub/pubspec

# The following section is specific to Flutter packages.
flutter:

# The following line ensures that the Material Icons font is
# included with your application, so that you can use the icons in
# the material_icons class.
uses-material-design: true

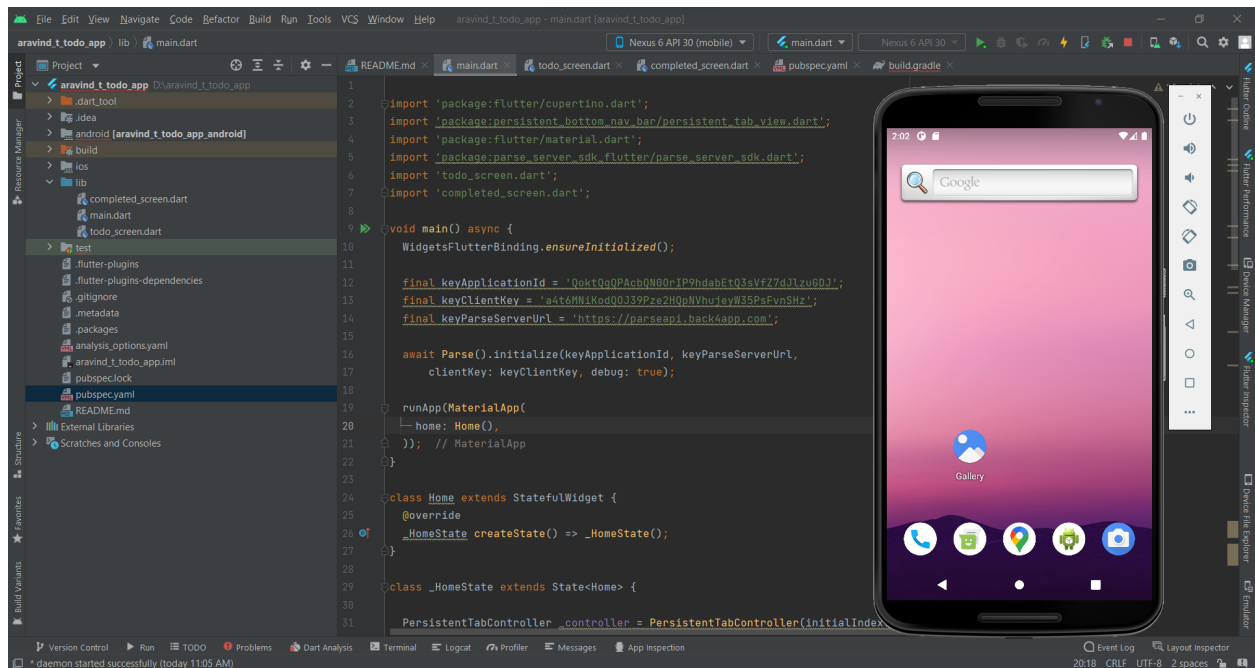
# To add assets to your application, add an assets section, like this:
# assets:
#   - images/a_dot_burn.jpeg
```

Added dependencies :

parse_server_sdk_flutter: ^3.1.0

persistent_bottom_nav_bar: ^5.0.2

Initiating Parse SDK and added Keys:



Step 3: Task List

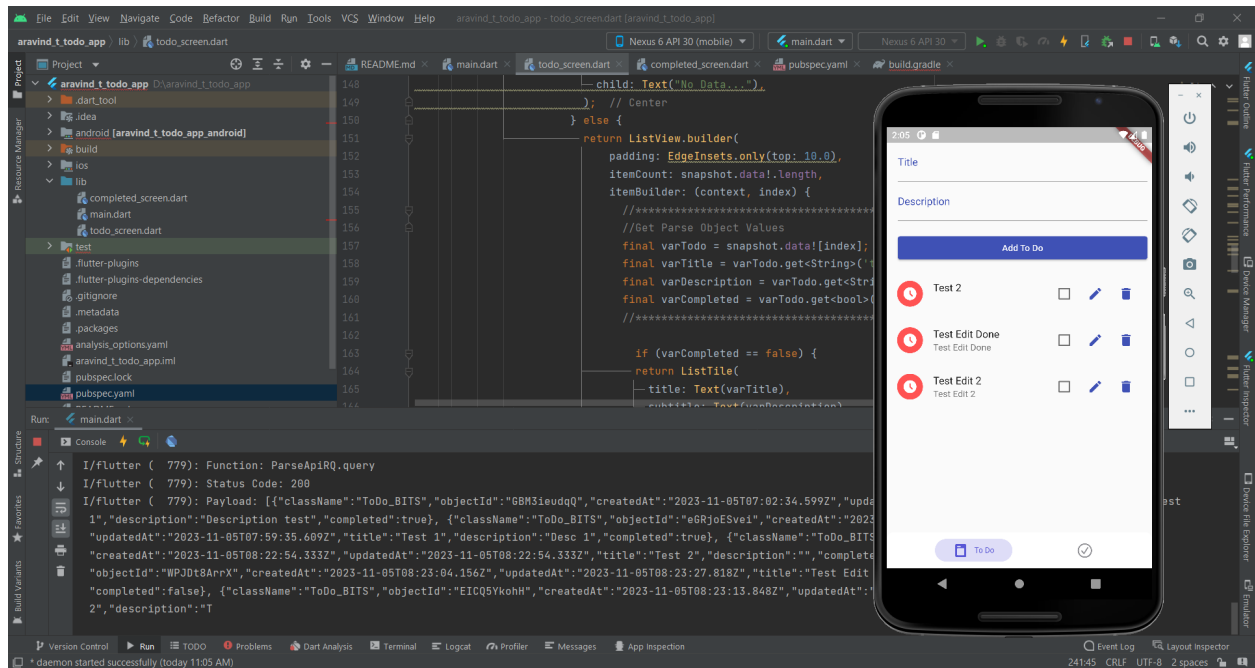
There are two screens in my app, which can be navigated through the bottom navigation bar. The first one is for creating tasks and viewing tasks. The second screen is to view completed tasks.

Added operations:

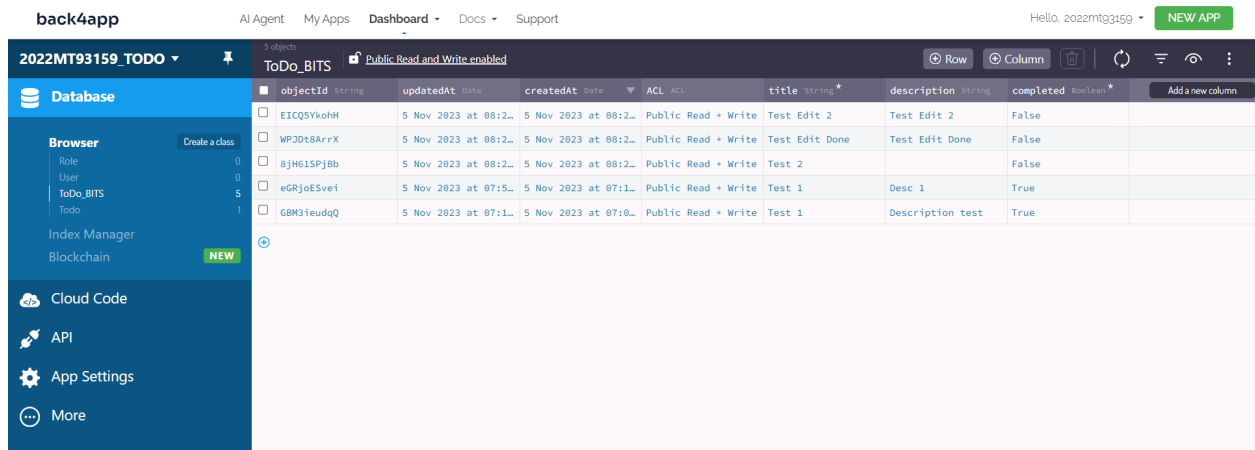
1. Create task.
2. View task.
3. Mark as completed.
4. Edit task.
5. Delete task.

Step 4: Task Creation:

Task creation screen, with added tasks:



Saving tasks to Back4App:



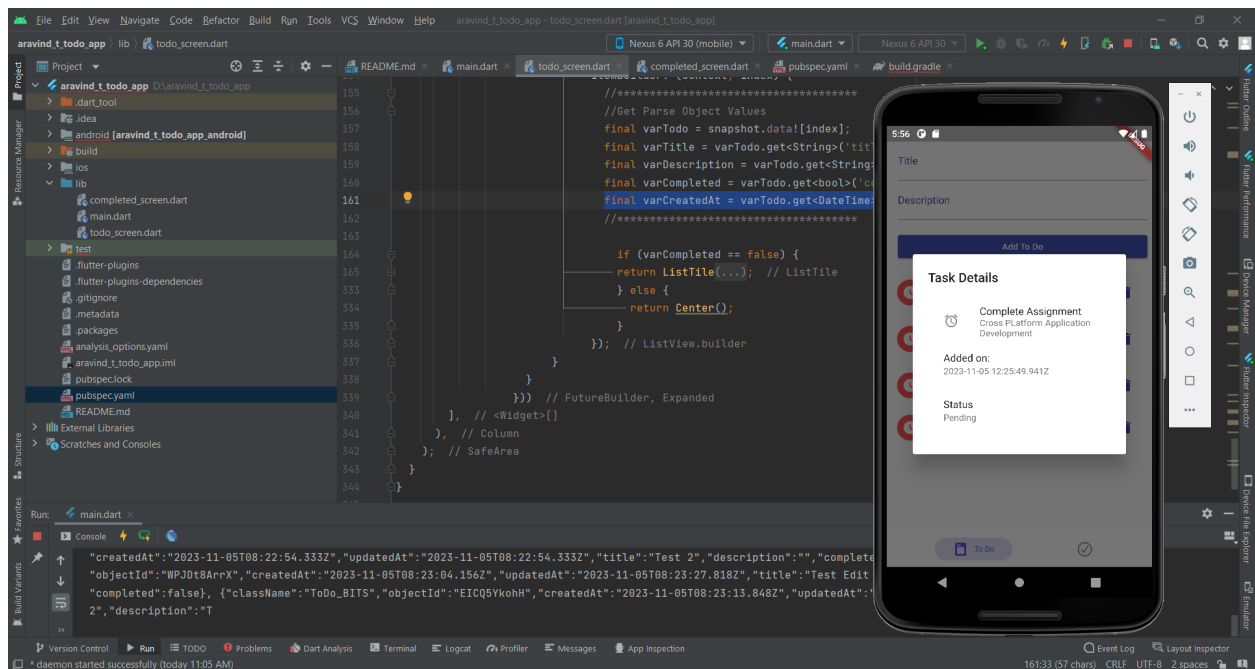
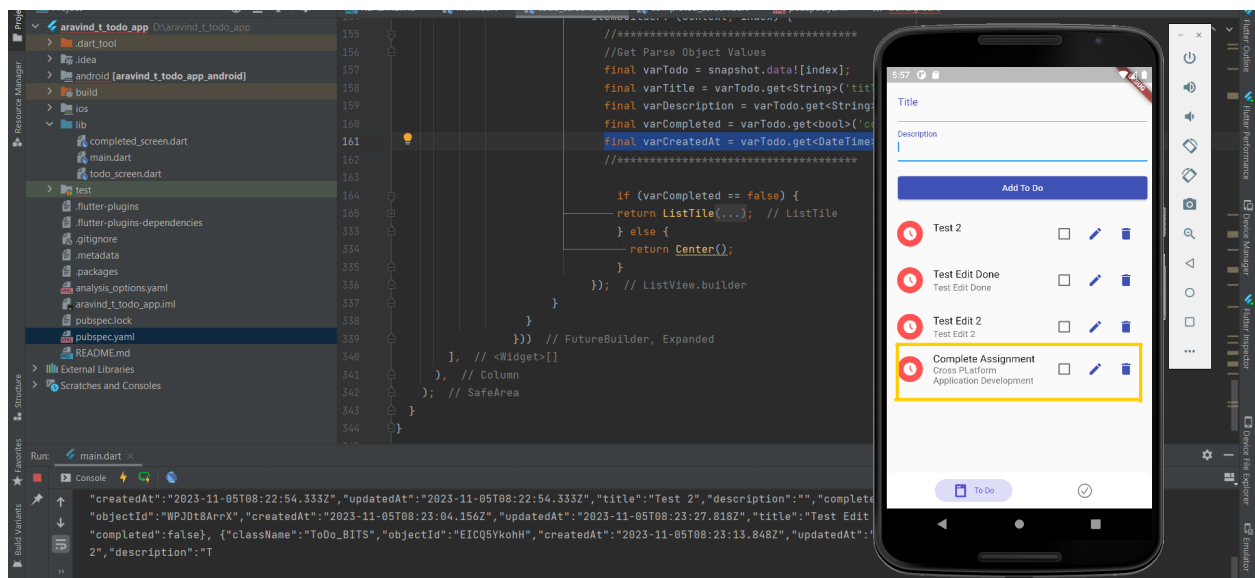
Step 5: Task Details:

A task detail can be viewed by tapping on the tasks. A dialogue is shown when a task is tapped.

Details to be viewed:

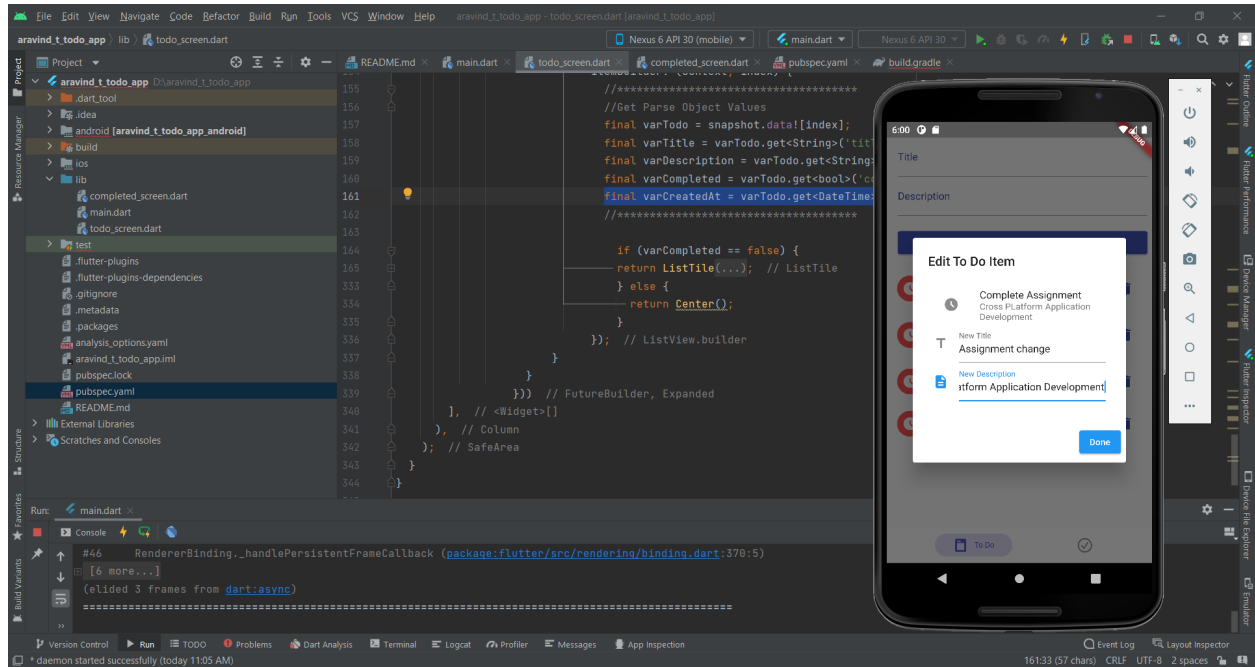
Title, Description, Created at, Status of completion

Viewing task details:

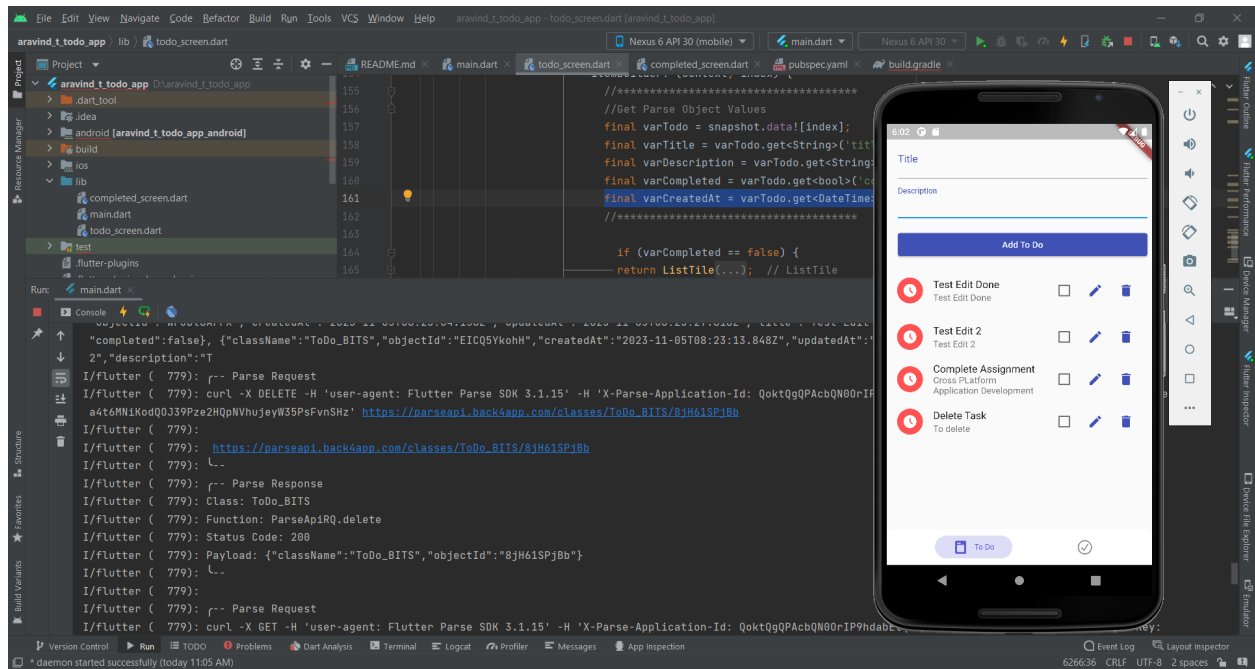


Step 6: Bonus Features

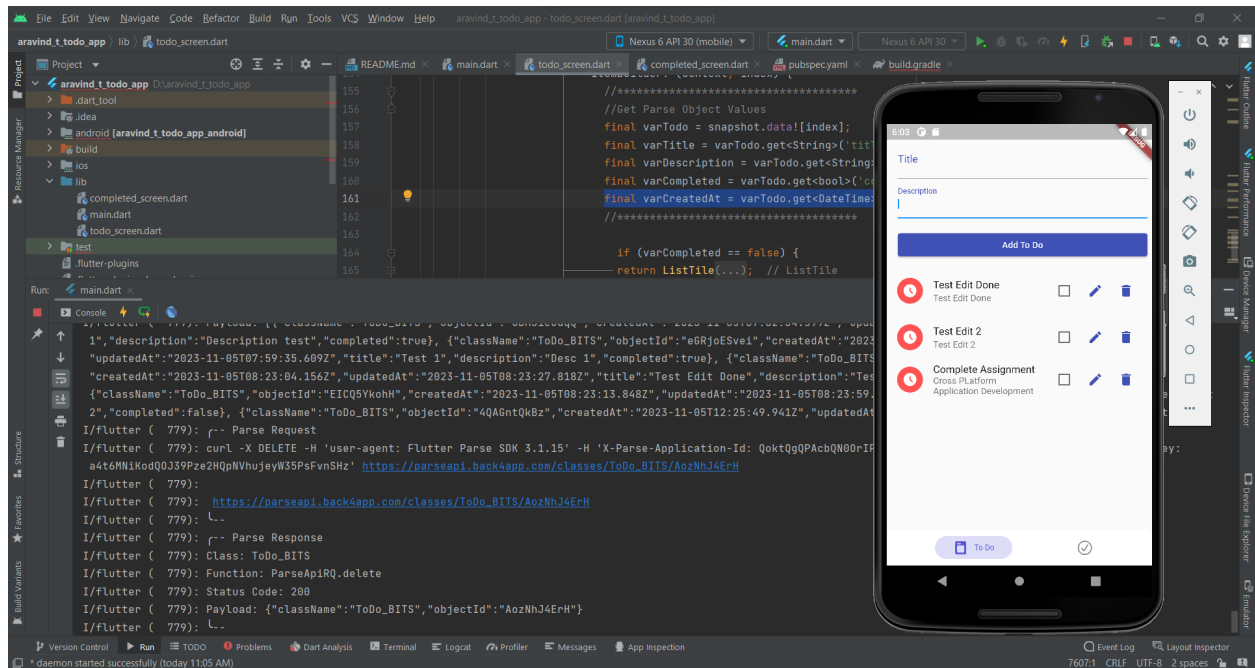
Editing Task:



Deleting Task:

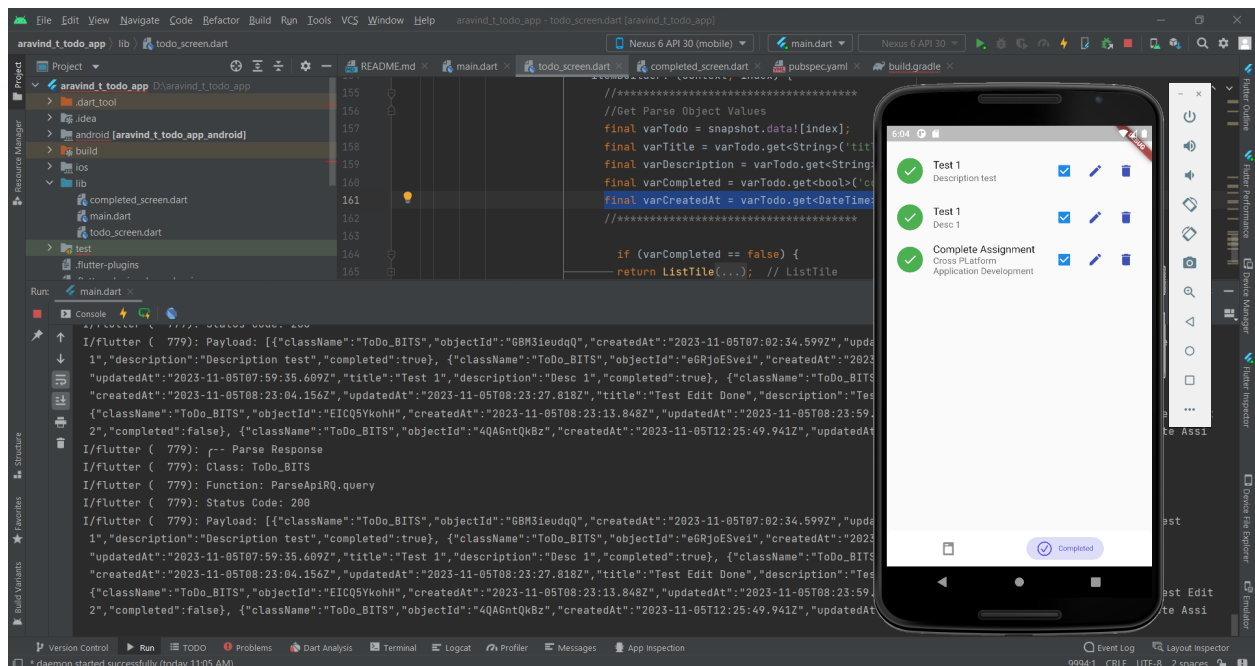


After deletion:



Additional enhancement:

To view completed tasks on a different screen:



Readme on setting up and running the app:

Step 1: Download and Install Android Studio on your Laptop or PC.

Step 2: Download and install Latest SDK's of Flutter and Dart.

Flutter: <https://flutter.dev/docs/get-started/install>

Dart: <https://dart.dev/get-dart>

Step 3: Open Android Studio and set up your virtual devices (OR) Connect your Android Device(USB Debugging enabled) to your Laptop/PC

Used Virtual device : PIXEL 4XL API 30

Refer to this link on how to set up virtual devices :
<https://developer.android.com/studio/run/managing-avds>

Step 4: Go to File -> New -> Project from version control.

Step 5: Under the Version control dropdown- Select "Git".

Step 6: Under the URL Tab paste the following:
https://github.com/Aravind1997-max/Aravind_T_Back4App_Flutter

Step 7: Choose the directory where you want the Project files to be stored.

Step 8: Click on "Clone" and wait for Android Studio to fetch the project files (This may take a while based on your internet speed).

Step 9: Once the project files are loaded, Search for "pubspec.yaml" file in the project folder and open it.

Step 10: On the top right, Android Studio might show a pop-up bar with options named "pub get" and "pub upgrade". Click on either of these and wait for Android Studio to fetch the necessary packages to run the application.

Refer to this documentation for more knowledge ->
<https://flutter.dev/docs/development/packages-and-plugins/using-packages>

Step 11: Once everything is done, Choose your Android device on the top dropdown button and click on Run (A green play button on the top right) or press Shift+F10.

Wait for Android Studio to run Gradle Task and check for any version incompatibilities. Once everything is alright, the app will be installed and run on your device.

Concepts learned:

1. How Back4App integrates with Flutter and cloud APIs.
2. How to create a flutter app from scratch.
3. How to perform CRUD operations over the cloud.
4. How to design and implement assignment requirements over the app.
5. How to embed packages built by Flutter community members.
6. How to upload the project to git and version control.