Cross Platform Application Development Assignment SEZG585 Flutter App with Back4app Integration

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Install required dependencies by inspecting using "flutter doctor" command

```
C:\Users\91979\assignment>flutter doctor

 ┌─────────────────────────────────────────────────────────────┐
 │ A new version of Flutter is available!                      │
 │                                                             │
 │ To update to the latest version, run "flutter upgrade".     │
 └─────────────────────────────────────────────────────────────┘

Doctor summary (to see all details, run flutter doctor -v):
[√] Flutter (Channel stable, 3.13.8, on Microsoft Windows [Version 10.0.22621.2715], locale en-IN)
[√] Windows Version (Installed version of Windows is version 10 or higher)
[!] Android toolchain - develop for Android devices (Android SDK version 34.0.0)
    ! Some Android licenses not accepted. To resolve this, run: flutter doctor --android-licenses
[√] Chrome - develop for the web
[!] Visual Studio - develop Windows apps (Visual Studio Community 2022 17.7.5)
    X Visual Studio is missing necessary components. Please re-run the Visual Studio installer for the "Desktop
      development with C++" workload, and include these components:
        MSVC v142 - VS 2019 C++ x64/x86 build tools
         - If there are multiple build tool versions available, install the latest
        C++ CMake tools for Windows
        Windows 10 SDK
[√] Android Studio (version 2022.3)
[√] Connected device (3 available)
[√] Network resources

! Doctor found issues in 2 categories.

C:\Users\91979\assignment>
```

Make sure to independent parse_server_sdk_flutter sing pubspec.yaml

```
dependencies:
  parse_server_sdk_flutter: ^7.0.0
  flutter:
    sdk: flutter
```

Get Application key IDs from back4app

App Keys

These are the unique identifiers used to access this app.

Application ID Main ID that uniquely specifies this app. Used with one of the keys below.	afvuhJkel8bgIrrCQXD08CrPO7R8EpGhBfBcwRpU
Client key Use this in consumer clients, such as the iOS or Android SDKs.	K4ZJFLUeu6OcVvG9qxSJ63Xaff9l4ttkOooDZje6
JavaScript key Use this when making requests from JavaScript clients.	kffGwm50fbOxlLMLTwISZYFik4rpFN9ehSipNj76
.NET key Use this when making requests from Windows, Xamarin, or Unity clients.	0oToGhr448Tr9Wm1HcwVoAXuQYUab7zzUgJIKJIF
REST API key Use this when making requests from server-side REST applications. Keep it secret!	Show REST Key
Webhook key Use this when implementing a Cloud Code Webhook. Keep it secret!	Show Webhook Key

Add Key IDs to the code in "main.dart"

```dart
import 'package:flutter/material.dart';
import 'package:parse_server_sdk_flutter/parse_server_sdk_flutter.dart';

void main() async {
  WidgetsFlutterBinding.ensureInitialized();

  final keyApplicationId = 'afvuhJkel8bgIrrCQXD08CrPO7R8EpGhBfBcwRpU';
  final keyClientKey = 'K4ZJFLUeu6OcVvG9qxSJ63Xaff9l4ttkOooDZje6';
  final keyParseServerUrl = 'https://parseapi.back4app.com';

  await Parse().initialize(keyApplicationId, keyParseServerUrl,
      clientKey: keyClientKey, debug: true);

  runApp(MaterialApp(
    home: TodoApp(),
    theme: ThemeData.dark(),
  ));
}

class TodoApp extends StatefulWidget {
  @override
  _TodoAppState createState() => _TodoAppState();
}

class _TodoAppState extends State<TodoApp> {
  final TextEditingController _todoController = TextEditingController();
  final TextEditingController _tagController = TextEditingController();
  List<ParseObject>? _todos;
  List<ParseObject> _selectedTodos = [];
  bool _isSearching = false;

  @override
  void initState() {
```
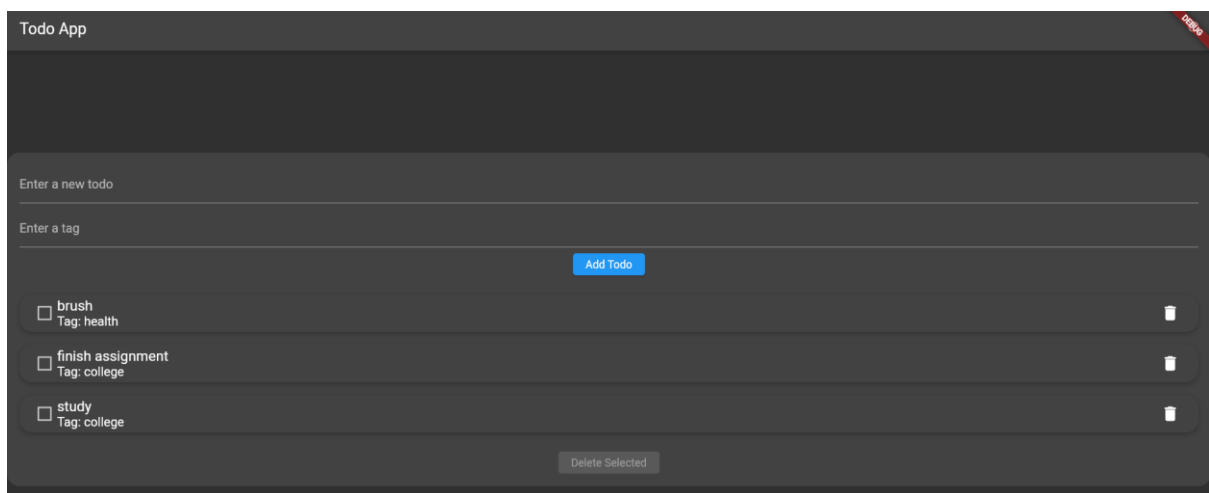
Use flutter run command and open in Chrome Debug mode


```
C:\Users\91979\assignment>flutter run
Connected devices:
Windows (desktop) • windows • windows-x64    • Microsoft Windows [Version 10.0.22621.2715]
Chrome (web)      • chrome  • web-javascript • Google Chrome 119.0.6045.160
Edge (web)        • edge    • web-javascript • Microsoft Edge 119.0.2151.72
[1]: Windows (windows)
[2]: Chrome (chrome)
[3]: Edge (edge)
Please choose one (or "q" to quit): 2
Launching lib\main.dart on Chrome in debug mode...
Waiting for connection from debug service on Chrome...        33.7s
This app is linked to the debug service: ws://127.0.0.1:2310/lOdAapMXV8c=/ws
Debug service listening on ws://127.0.0.1:2310/lOdAapMXV8c=/ws

 To hot restart changes while running, press "r" or "R".
For a more detailed help message, press "h". To quit, press "q".

A Dart VM Service on Chrome is available at: http://127.0.0.1:2310/lOdAapMXV8c=
┌─ Parse Request
curl -X GET -H 'X-Parse-Application-Id: afvuhJkel8bgIrrCQXD08CrPO7R8EpGhBfBcwRpU' -H 'X-Parse-Client-Key: K4ZJFLUeu6OcVvG9qxSJ63Xaff9l4ttkOooDZje6'
https://parseapi.back4app.com/classes/Todo?where=%7B%7D&order=-createdAt

https://parseapi.back4app.com/classes/Todo?where={}&order=-createdAt
└─
```
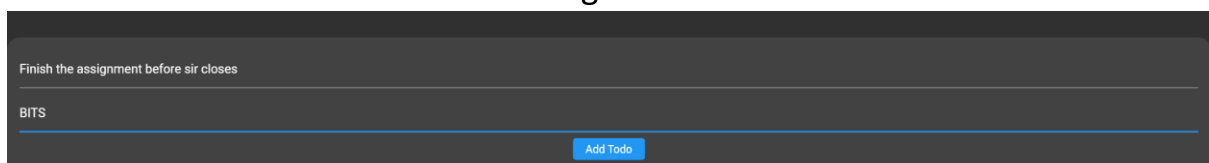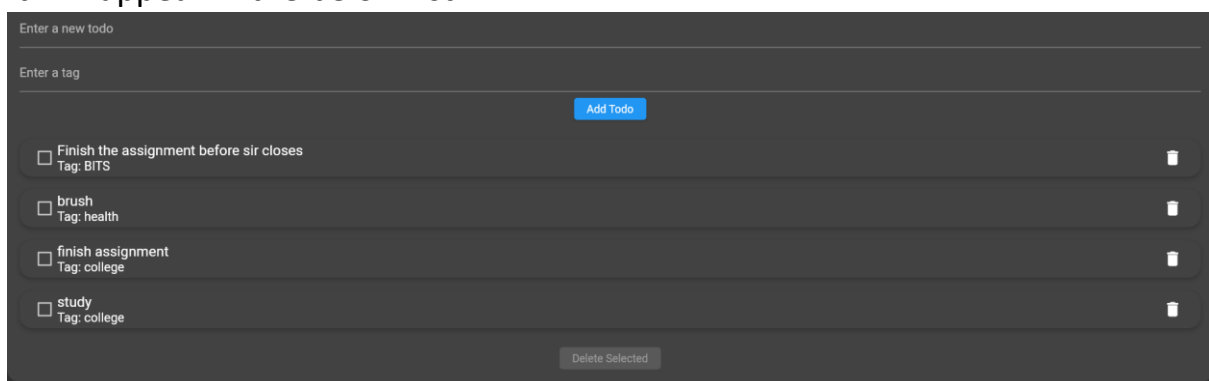
In Google Chrome the below UI will open

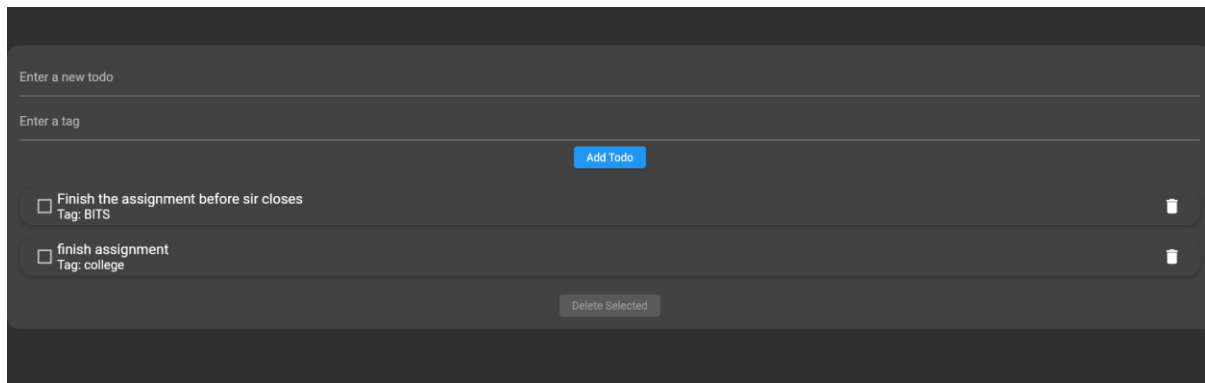Add the task in the first tab and the tag in the UI and click on "Add Todo"

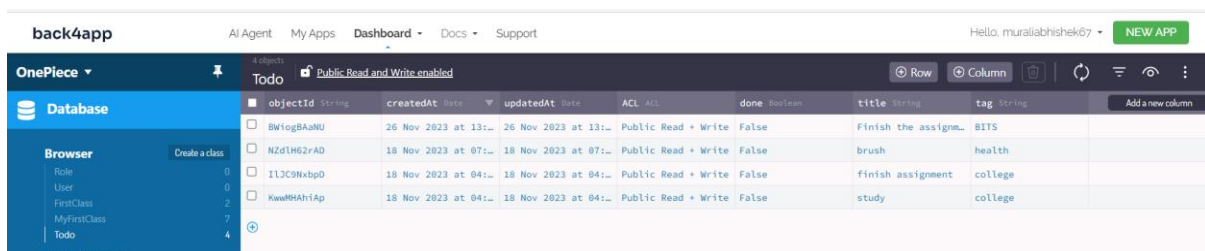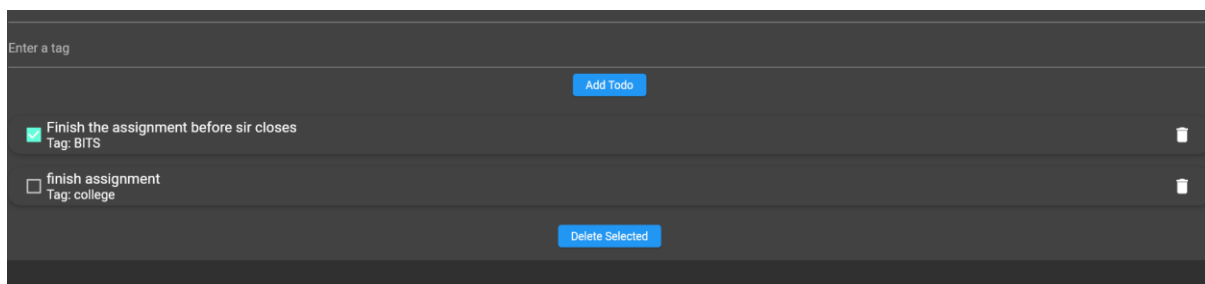It will appear in the below list

Search button is on the top right

We can search "Finish" and the below table will appear

We can observe in Todo Class in Back4app also these fields would have appeared

Select the todo and delete the todo from the UI

Full code available at
https://github.com/Abhishek-0412/BitsCrossPlatformFlutterAppAssignment