Practical 10: Create and application Crud Operation with SQLite in Flutter.

Code :

```
import 'package:flutter/material.dart'; import 'package:resetapi/sqlHelper.dart';
void main() { runApp(const MyApp()); } class MyApp extends StatelessWidget {
const MyApp({Key? key}) : super(key: key);
@override
Widget build(BuildContext context) { return MaterialApp(
theme: ThemeData( primarySwatch: Colors.orange, ),
home: const HomePage()); } } class HomePage extends
StatefulWidget { const HomePage({Key? key}) :
super(key: key);
@override
_HomePageState createState() => _HomePageState(); }
class _HomePageState extends State<HomePage> {
List<Map<String, dynamic>> _journals = []; bool
_isLoading = true;
// This function is used to fetch all data from the database void _refreshJournals() async { final
data = await SQLHelper.getItems(); setState(() {
_journals = data;
_isLoading = false; }); }
@override
void initState() { super.initState();
_refreshJournals(); // Loading the diary when the app starts } final
TextEditingController _titleController = TextEditingController(); final
TextEditingController _descriptionController = TextEditingController();
// This function will be triggered when the floating button is pressed
// It will also be triggered when you want to update an item void _showForm(int? id) async { if
(id != null) {
// id == null -> create new item
// id != null -> update an existing item final existingJournal =
_journals.firstWhere((element) => element['id'] == id);
_titleController.text = existingJournal['title'];
_descriptionController.text = existingJournal['description']; }
showModalBottomSheet( context: context, elevation: 5, isScrollControlled: true, builder: (_) =>
Container(
padding: EdgeInsets.only( top: 15,
left: 15, right: 15,
// this will prevent the soft keyboard from covering the text fields bottom:
MediaQuery.of(context).viewInsets.bottom + 120, ),
child: Column(
mainAxisSize: MainAxisSize.min, crossAxisAlignment: CrossAxisAlignment.end, children: [ TextField(
```

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```
controller: _titleController,
decoration: const InputDecoration(hintText: 'Title'), ),
const SizedBox( height: 10, ), TextField(
controller: _descriptionController,
decoration: const InputDecoration(hintText: 'Description'), ),
const SizedBox( height: 20, ), ElevatedButton( onPressed: ()
async {
// Save new journal
if (id == null) { await _addItem(); }
if (id != null) {
await _updateItem(id); } //
Clear the text fields
_titleController.text = '';
_descriptionController.text = ''; ) ], ), ));
}// Close the bottom sheet Navigator.of(context).pop();},
child: Text(id == null ? 'Create New' : 'Update'),
// Insert a new journal to the database Future<void> _addItem() async { await SQLHelper.createItem(
_titleController.text, _descriptionController.text);
_refreshJournals(); }
// Update an existing journal Future<void> _updateItem(int id) async { await SQLHelper.updateItem(
id, _titleController.text, _descriptionController.text);
_refreshJournals(); } //
Delete an item
void _deleteItem(int id) async { await SQLHelper.deleteItem(id);
ScaffoldMessenger.of(context).showSnackBar(const SnackBar( content: Text('Successfully deleted a
journal!'), )); _refreshJournals(); }
@override
Widget build(BuildContext context) { return Scaffold( appBar:
AppBar(
title: const Text('SQL'), ),
body: _isLoading ? const
Center(
child: CircularProgressIndicator(), )
: ListView.builder( itemCount: _journals.length,
itemBuilder: (context, index) => Card( color: Colors.orange[200],
margin: const EdgeInsets.all(15), child: ListTile( title:
Text(_journals[index]['title']),


subtitle: Text(_journals[index]['description']), trailing: SizedBox(
width: 100, child: Row( children: [ IconButton(
icon: const Icon(Icons.edit),
onPressed: () => _showForm(_journals[index]['id']), ), IconButton(
```

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```
icon: const Icon(Icons.delete), onPressed: () =>
_deleteItem(_journals[index]['id']),
), ], ), )), ), ),
floatingActionButton: FloatingActionButton( child: const Icon(Icons.add), onPressed:
() => _showForm(null),
), ); } }


sqlHelper.dart: import 'package:flutter/foundation.dart'; import
'package:sqflite/sqflite.dart' as sql; class SQLHelper {
static Future<void> createTables(sql.Database database) async { await database.execute("""CREATE
TABLE items(
id INTEGER PRIMARY KEY AUTOINCREMENT NOT NULL, title
TEXT, description TEXT,
createdAt TIMESTAMP NOT NULL DEFAULT CURRENT_TIMESTAMP
)
""");
}
// id: the id of a item
// title, description: name and description of your activity
// created_at: the time that the item was created. It will be automatically handled by SQLite static
Future<sql.Database> db() async { return sql.openDatabase(
'dbtech.db', version: 1,
onCreate: (sql.Database database, int version) async { await createTables(database);
}, );
}
// Create new item (journal)
static Future<int> createItem(String title, String? descrption) async { final db = await SQLHelper.db();
final data = {'title': title, 'description': descrption}; final id = await db.insert('items', data,
conflictAlgorithm: sql.ConflictAlgorithm.replace); return id;
}
// Read all items (journals)
static Future<List<Map<String, dynamic>>> getItems() async { final db = await SQLHelper.db(); return
db.query('items', orderBy: "id");
}
// Read a single item by id
// The app doesn't use this method but I put here in case you want to see it static
Future<List<Map<String,
dynamic>>> getItem(int id) async {
final db = await SQLHelper.db();
```

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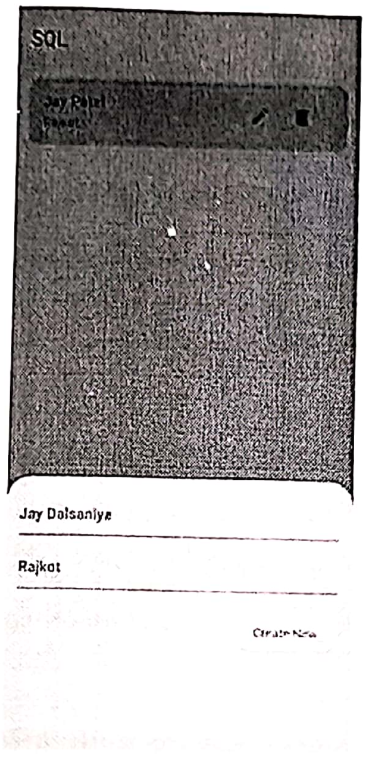
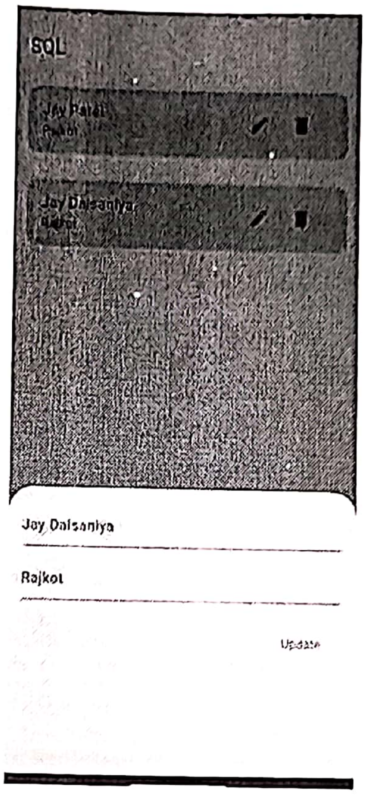
- **Output:**



Jay Patel
Rajkot
Jay Dalsaniya
Rajkot



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Rajkot
Jay Dalsaniya
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Rajkot

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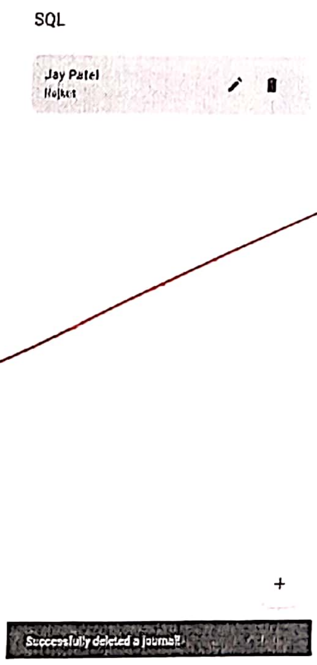

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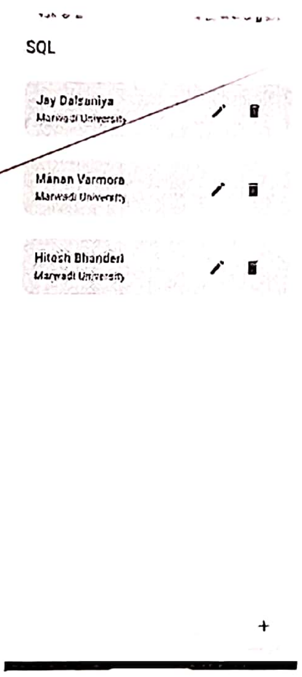
Rajkot
Successfully deleted a journal!



Jay Dalsaniya
Marwadi University
Manan Varmora
Marwadi University
Hitesh Bhanderi
Marwadi University

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