Faculty of Technology and Engineering

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Date: / /

Laboratory Manual Performa

| Academic Year | : | 2024-25 | Semester | : | 5TH |
| Course code | : | CSE309 | Course name | : | Mobile Application and Development |

Practical - 4

Create a to-do Application using Text field Button. On the button click event display data in List.

Introduction of relevant concepts used:

- **StatefulWidget**: A widget in Flutter that maintains mutable state, enabling the UI to dynamically update in response to user interactions, such as adding new tasks in a to-do application.

```dart
main.dart
import 'package:flutter/material.dart';
import 'screens/todo_screen.dart';

void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'To-Do Application',
      theme: ThemeData(
      primarySwatch: Colors.blue,
      ),
      home: TodoScreen(),
    );
  }
}

Todo_screen.dart
import 'package:flutter/material.dart';

class TodoScreen extends StatefulWidget {
  @override
  _TodoScreenState createState() => _TodoScreenState();
}
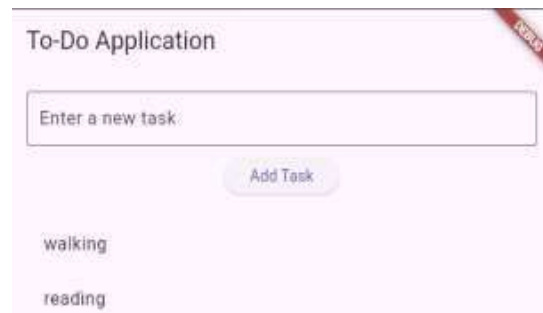```

```
class _TodoScreenState extends State<TodoScreen> {
 final TextEditingController taskController = TextEditingController();
 final List<String> tasks = [];

 void _addTask() {
  if (taskController.text.isNotEmpty) {
   setState(() {
   tasks.add(taskController.text);
    taskController.clear(); // Clear the text field after adding
   });
  }
 }
 Widget build(BuildContext context) {
  return Scaffold(
   appBar: AppBar(
    title: Text('To-Do Application'),),
   body: Padding(
    padding: const EdgeInsets.all(16.0),
    child: Column(
     children: [
      TextField(
       controller: taskController,
       decoration: InputDecoration(
       labelText: 'Enter a new task',
       border: OutlineInputBorder(),
       ),),
      SizedBox(height: 10),
      ElevatedButton(
      onPressed: _addTask,
      child: Text('Add Task'),),
      SizedBox(height: 20),
      Expanded(
       child: ListView.builder(
        itemCount: tasks.length,
        itemBuilder: (context, index) {
        return ListTile(
          title: Text(tasks[index]),
         );
        },
       ),
      ),
     ],
    ),
   ),
  );
}}
```

Output (Screenshot)