

## TODO: Flutter app

The todo app has been created using the Flutter framework. Flutter works with the programming language Dart and makes it possible to create windows applications, android apps, and iOS apps all at the same time. The todo app is currently working on android phones.

The app has been created in one file, which is the `main.dart` file in the `lib` folder. The app consists of 4 classes namely: `ToDoApp`, `ToDoList`, `ToDo`, `_ToDoListState`.

`ToDoApp` is a stateless widget which contains the main information of the app and returns the `MaterialApp` widget. In this widget the main styling of the app is located at the property named `theme`. The `MaterialApp` is used to show the home screen of the app, which is the `ToDoList` class.

The `ToDoList` class is a class that has a state and creates an instance of the `_ToDoListState` class as the state in `ToDoList`.

The `_ToDoListState` class contains a lot of functionality to manage the state of the todos in the app. This class contains all the methods to add, remove, and complete a todo in the todo list. The todos are saved in the state `_todos` which is a list, containing `ToDo` elements. The `ToDo` class is representing the todo in the list and contains two fields namely the `todoTitle` and `checked`. `todoTitle` is the todo itself and `checked` is used to manage if the todo has been completed. The `ToDo` class also implements the `Comparable` interface, which is used to make the todo list sortable.

The todo list is sorted each time a checkbox is being pressed, where the completed todos will appear at the bottom of the list, and the uncompleted todos at the top of the list. When the todo is completed, the text in the todo is also striked out.

`_ToDoListState` also builds the visual of the app and where the widgets are placed. Here the `Scaffold` is used, where the `body` consists of a `Column` which has two children: `SizedBox` and `Expanded`. The `SizedBox` is used to contain the clear completed todos button, and the `Expanded` is used to contain the todo list, which is shown as a `ListView`.

To add a todo, the user presses the button at the bottom right corner of the phone. This opens an `AlertDialog`, where a text field occurs, the user types the todo in the text field and presses the "Add todo" button.