Mobile Software Development

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## 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 show the homescreen of the app, which is the TodoList class.

The TodoList class is a class that has a state contains 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 todolist. 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 todolist sortable.

The todolist 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. To do this 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 textfield occurs.