Report: Tasks App Development – Part 1 of 2 App Dev Projects
Developed by: Noel Ninan Sheri
Platform: Android Studio
Tech Stack: Java/Kotlin, XML, Android SDK
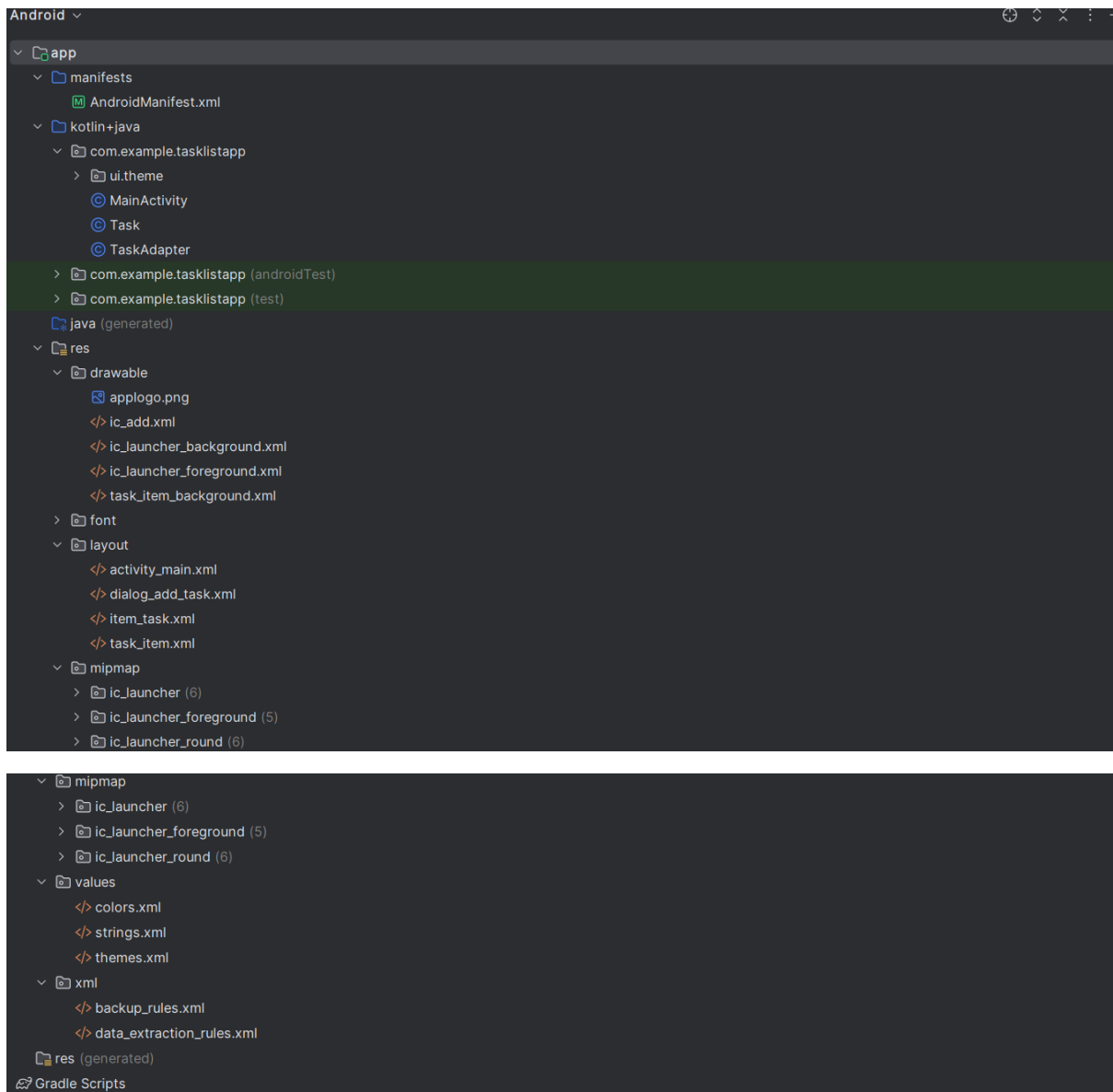
---

1. Introduction

The **Tasks App** is an Android application designed to help users manage their daily tasks effectively. With a user-friendly interface, the app allows users to add, update, prioritize, and delete tasks. The application aims to improve productivity and task organization, providing a seamless user experience with an enhanced UI/UX.

---

2. Project Structure

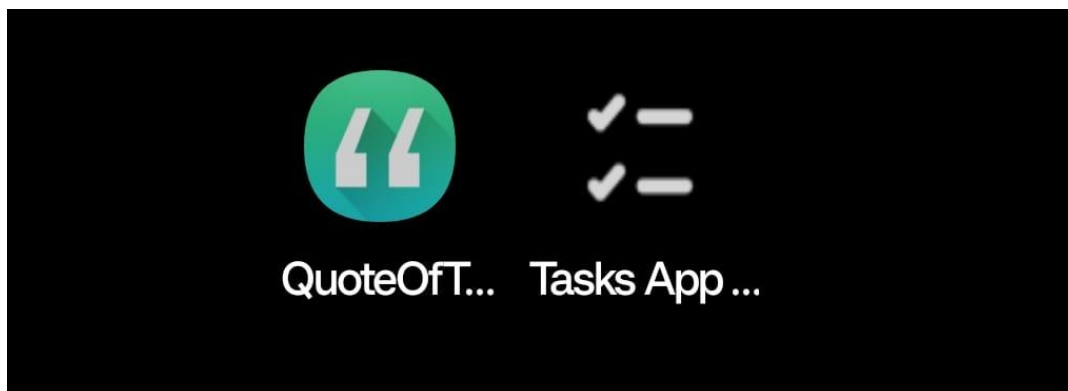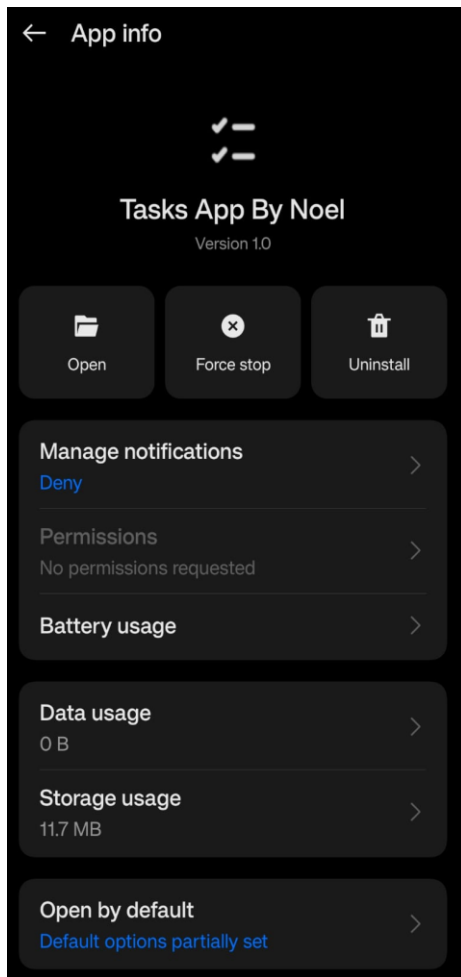The project consists of the following main components:

- **MainActivity.java:** Handles the main user interface and task operations.

- **TaskAdapter.java:** Manages the Recycler View displaying tasks.

- **Task.java:** Data model for tasks.

- **activity_main.xml:** Layout for the main activity.

- **item_task.xml:** Layout for individual task items.

- **colors.xml & themes.xml:** Manages the app's colour scheme and themes.

- **AndroidManifest.xml:** Declares activities and app configurations.

Project Structure (Android View)


```
Android ∨
∨ ▢ app
  ∨ ▢ manifests
      Ⓜ AndroidManifest.xml
  ∨ ▢ kotlin+java
    ∨ ▢ com.example.tasklistapp
      > ▢ ui.theme
        Ⓒ MainActivity
        Ⓒ Task
        Ⓒ TaskAdapter
    > ▢ com.example.tasklistapp (androidTest)
    > ▢ com.example.tasklistapp (test)
    ▢ java (generated)
  ∨ ▢ res
    ∨ ▢ drawable
        ▨ applogo.png
        </> ic_add.xml
        </> ic_launcher_background.xml
        </> ic_launcher_foreground.xml
        </> task_item_background.xml
    > ▢ font
    ∨ ▢ layout
        </> activity_main.xml
        </> dialog_add_task.xml
        </> item_task.xml
        </> task_item.xml
    ∨ ▢ mipmap
      > ▢ ic_launcher (6)
      > ▢ ic_launcher_foreground (5)
      > ▢ ic_launcher_round (6)
```

```
    ∨ ▢ mipmap
      > ▢ ic_launcher (6)
      > ▢ ic_launcher_foreground (5)
      > ▢ ic_launcher_round (6)
    ∨ ▢ values
        </> colors.xml
        </> strings.xml
        </> themes.xml
    ∨ ▢ xml
        </> backup_rules.xml
        </> data_extraction_rules.xml
    ▢ res (generated)
  🖉 Gradle Scripts
```

General App Information after Creation:

The Application is installed on the android device via Developer Options and through USB Debugging. The app Info interface contains information such as:
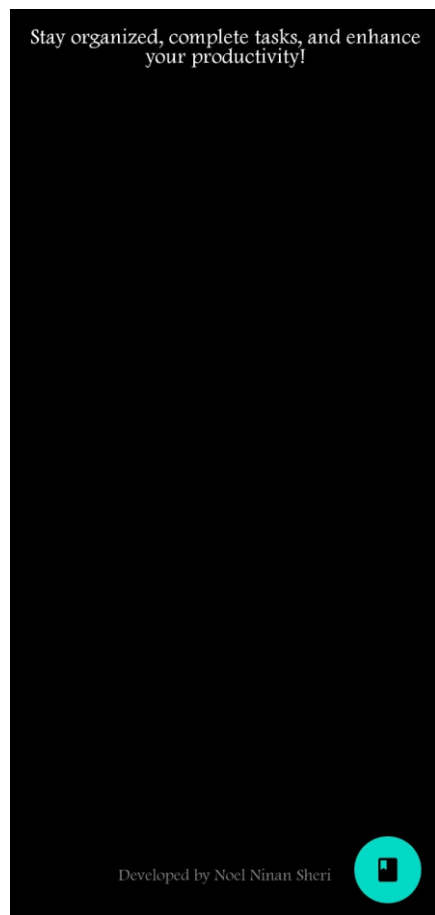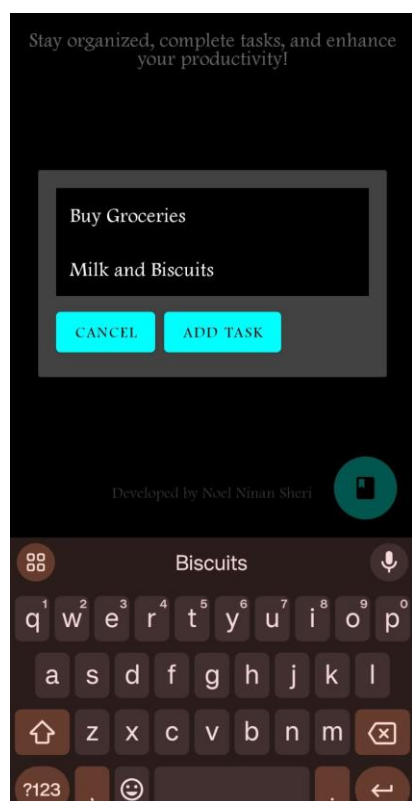
3. Features and Implementation

3.1 Adding Tasks

Users can add new tasks by entering the task name and clicking the **Add Task** button. The app validates the input and displays an appropriate message if the task name is empty.
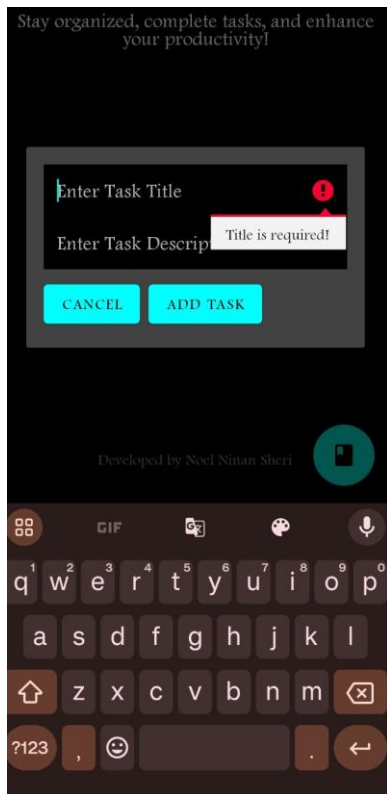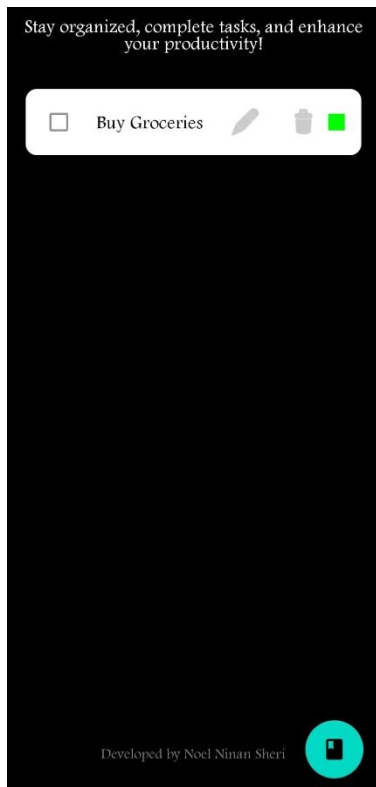
This is before adding tasks:

Stay organized, complete tasks, and enhance your productivity!

Developed by Noel Ninan Sheri

Adding Tasks:

Stay organized, complete tasks, and enhance your productivity!

Buy Groceries

Milk and Biscuits

CANCEL   ADD TASK

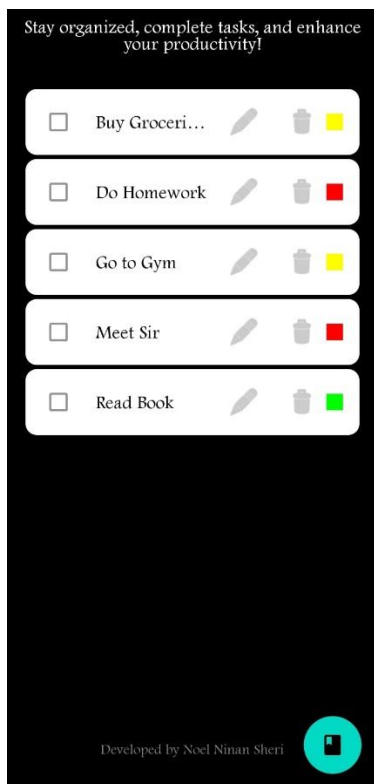Developed by Noel Ninan Sheri

Biscuits

If Task Name field is left empty, appropriate message is displayed:

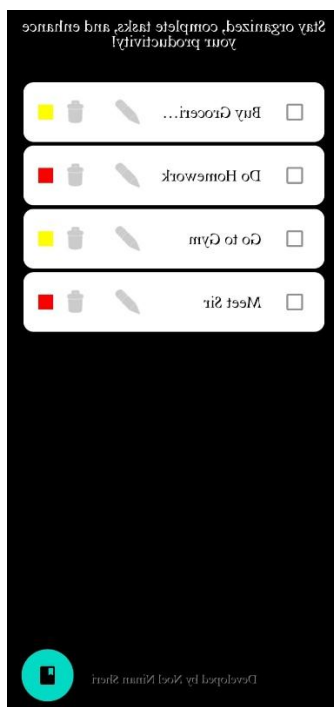Confirmation and adding task:

Once multiple records have been added:

3.2 Deleting Tasks

Tasks can be deleted using the delete icon next to each task. A confirmation prompt ensures tasks are not removed accidentally.

Deletion of a task by the Bin button:

3.3 Updating Tasks

Tapping on a task allows the user to update its details, ensuring easy modifications.
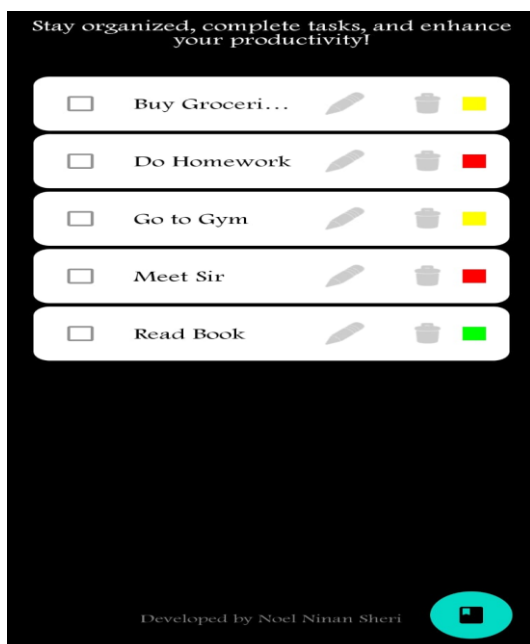
Updating a task and its info by update feature:

3.4 Prioritizing Tasks

Users can set priorities (High, Medium, Low) for tasks. High-priority tasks are highlighted for quick identification.

The colours correspond to the urgency of the task:

3.5 Enhanced UI/UX

The app features a modern design with:

- Consistent colour scheme
- Smooth animations
- Responsive layouts for various screen sizes

---

4. Code Explanation

4.1 MainActivity.java

This file handles user interactions and task list management.

- Initializing Recycler View and Adapter
- Handling add, update, and delete operations
- Displaying Toast messages for validations

4.2 TaskAdapter.java

Manages how tasks are displayed within the Recycler View.

- View Holder pattern for efficient scrolling
- OnClickListeners for update and delete actions

4.3 Layout Files

- **activity_main.xml:** Contains buttons, EditText, and RecyclerView.
- **item_task.xml:** Defines the layout for individual tasks.

---

5. Demonstration Explanation

The app demonstration covers:

- Launching the app
- Adding, updating, deleting, and prioritizing tasks
- Validation messages for empty task names

- Responsive UI across devices

---

6. Conclusion

The **Tasks App** provides a comprehensive solution for task management with essential features like adding, deleting, updating, and prioritizing tasks. The application ensures a smooth user experience with thoughtful design and responsive functionality.