PROJECT TITLE: EVENT CALENDAR APPLICATION

Project Description:

Calendar Application is one of the best apps that help users in time management by scheduling the event details. The event calendar application is a custom view of the calendar and provides an easier way that allows the users to navigate through the preceding and succeeding months. By default, it will display the current date. The application provides the user to add a new event by selecting on any day of the month. These events can be viewed by long pressing on any day with previously added events and can also be modified/deleted. While creating a new event, the user has an option of enabling or disabling the notification for the event date. In addition, the user can set alert when viewing previously generated events. The event calendar application provides functionalities like single interface, create / update / delete events, notifications to make more user-friendly.

Utilizing grid and linear layout manager, the days of the month in the calendar is inflated with the help of android calendar instance. There are several local databases like SQLite and ROOM as well as remote databases like MySQL, Firebase and Maria DB which can used. In our project we intend to use SQLite which is an open source and already embedded in android by default. As a result, the user can add, alter, and delete the events. We will be using Java as a programming language to develop the proposed application.

Requirement Specifications:

1. Linear layout with horizontal orientation is used and text view is used to display the 7 days of the week in the view layout.
2. GridView with numColumns attribute = 7 is set in order to have days in 7 columns and will have the event calendar view.
3. Recyclerview with right arrow and left arrow button for sliding next month and previous month.
4. For the add new events will have following activities:
    i. EditText for entering the event name.
    ii. ImageButton for time choosing dialog, TextView for displaying the selected event time and checkbox for setting alarm notification.
    iii. Add button to save the new events.
5. For the show events will have the following activities:
    i. TextView for displaying the event date, event name, event time.
    ii. ImageButton for displaying alarm notification
    iii. Delete button to delete the saved events.

Technical Description:

Event calendar application is designed that allow the users to navigate through the previous and next months in a flexible way. Initial layout displays the current month and the corresponding year. The event calendar view consists of linear layout with horizontal orientation. This contains 7 text views and added GridView with numColumns attribute set to 7 that represents 7 days of weeks. Utilizing grid and linear layout manager, the days of the month in the calendar is inflated with the help of android calendar instance. In total, the layout displays 42 days where

current month days are highlighted, and the rest are greyed out. This sets up the calendar view as shown in Figure1.

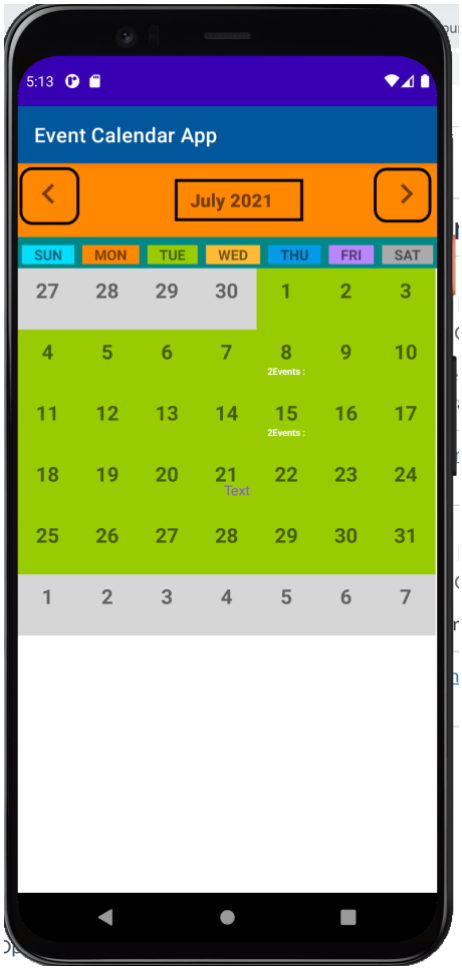

Figure1: Event Calendar View

Add New Event

The application allows the user to add a new event by selecting on any day of the month. Implemented OnItemClickListener interface to handle the click events to select the day. The add event view consists of a linear layout with vertical orientation. The layout has EditText widget that provides an option to the user to enter the name of event. The later linear layout with horizontal orientation has three widgets. First is ImageButton and used for time picker. Second is the

TextView for presenting the selected event time and third is CheckBox for setting alarm. Add Event button saves the events to the calendar as shown in the Figure2 and to the SQLite database.

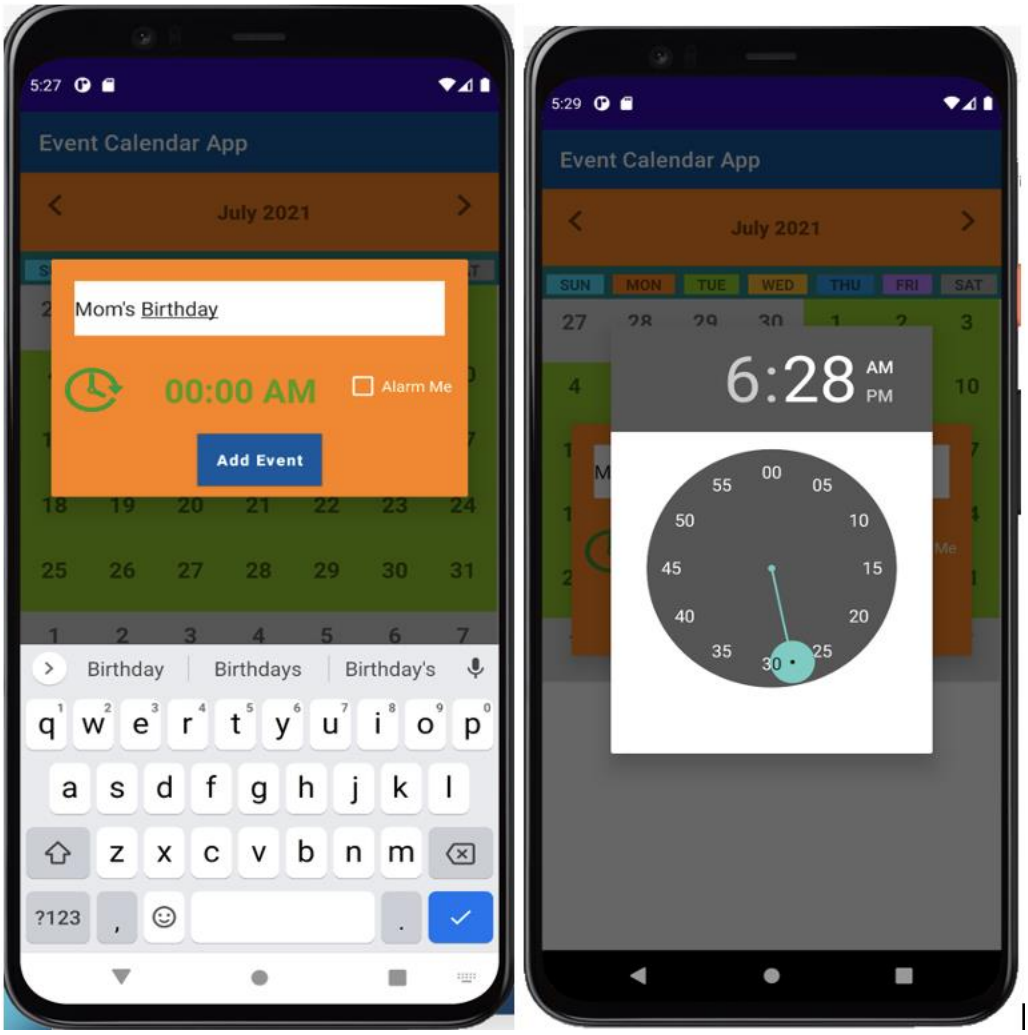

Figure2: Add New Event with timer picker dialog.

Show Event

Events can be viewed by long press feature which displays the information of all the events for the selected date as shown in Figure3. Implemented

OnItemLongClickListener interface of the grid layout to handle the long click events. Used RecyclerView that allows the multiple events to be viewed in the layout and CardView to display the data by providing a rounded corner layout along with a specific elevation.

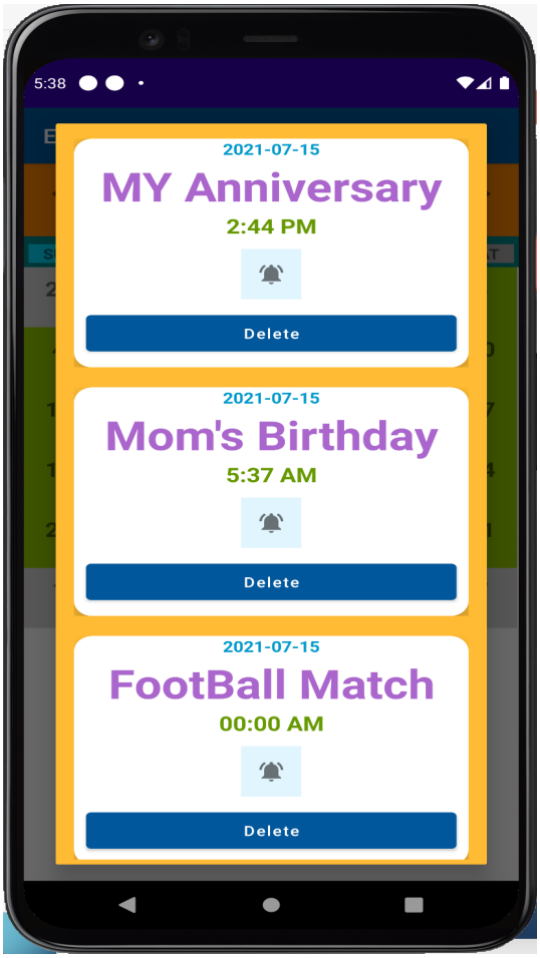

Figure3: show events

Delete Event

The users can delete the events that are already created. Delete button is enabled in the Show Event layout. Events are removed from the calendar as well as from the SQLite database as shown in Figure4.

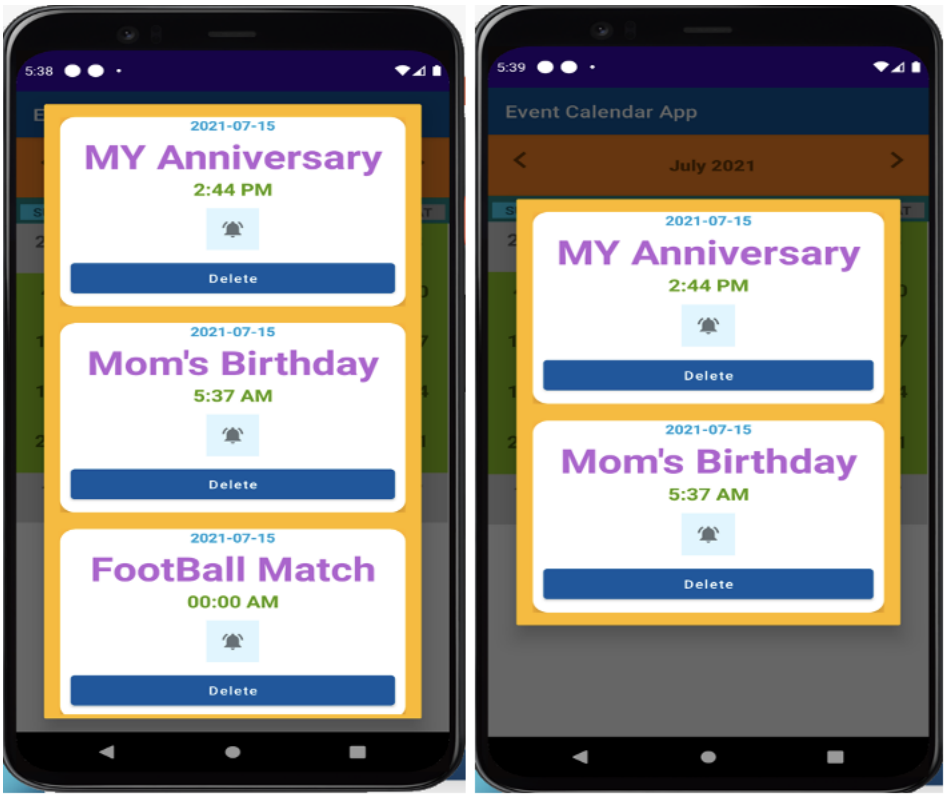

Figure4: Events before and after Delete

Notification of an Event

While creating an event, there is CheckBox provided in Add Event layout where user has an option of enabling or disabling the notification for the event date. Also, there is another option for the user to set alert using notification icon which is provided when viewing the previously generated events in Show Event layout. Notifications enabled are popped up in the status bar or the notification bar as shown in the Figure5. Implemented AlarmReceiver class that extends the BroadcastReceiver and overrides the onReceive method which allows to specify

actions to be taken when the alarm broadcast message is received. NotificationChannel is implemented that can modify notification settings for the entire channel.

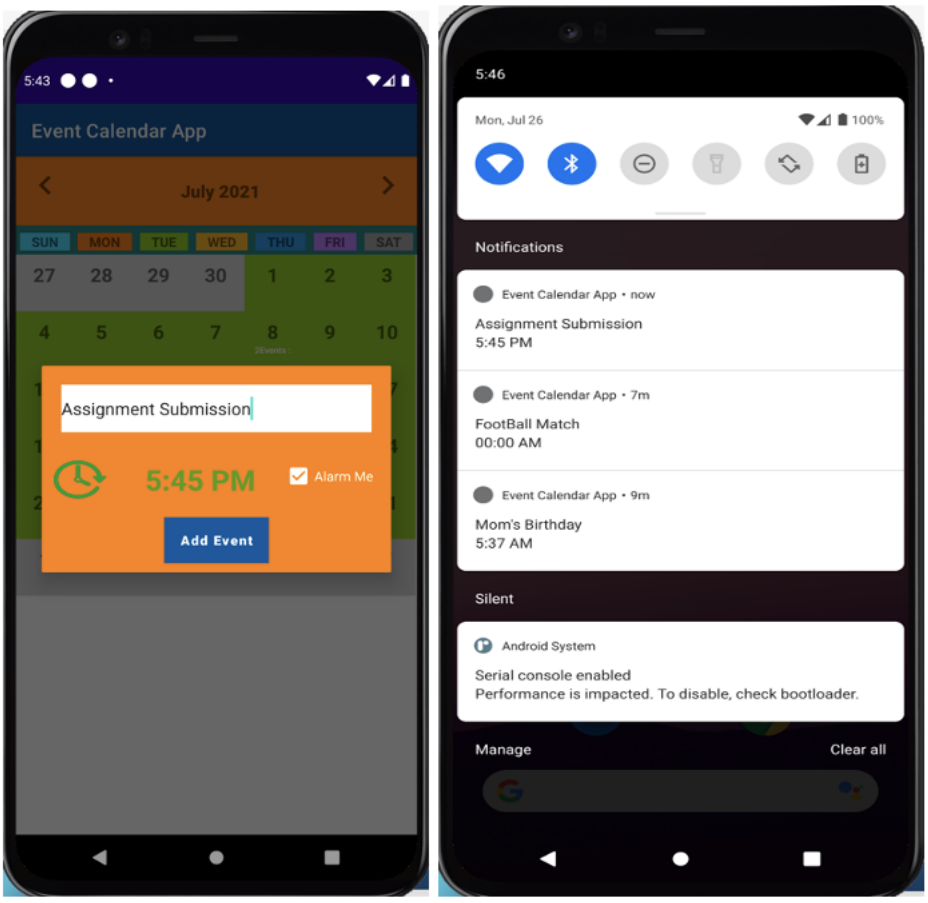

Figure5: Notification of an Event