



# **AMERICAN UNIVERSITY IN DUBAI**

## **SCHOOL OF ENGINEERING**

**DEPARTMENT OF  
Electrical & Computer Engineering**

***EECE 457 - MOBILE APPLICATIONS***

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### **Bucket List App Report**

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# Table of Content

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|                       |   |
|-----------------------|---|
| List of Figures ..... | 3 |
| Instruction:.....     | 4 |
| Lesson Learned:.....  | 4 |
| Special Info:.....    | 5 |

List of Figures

Figure 1: Color Range.....4

## Instruction:

The purpose of the app is that to store a list of activities that a user wants to do at the certain time. User has a choice of sign up or log in. After the user is authenticate will have an empty list that user can add items to it. The items in the list will be sorted base on their due date and depend of the days left to their deadline the background of each item will change. Moreover, if they are completed they will go to the end of list and they will be marked as green.



Figure 1: Color Range

The background of the items will change in the order as it shows in figure 1. If the item is overdue the color will be red. If the due date is within the next 2 days, the background will be orange. If the deadline is in the next five days from today's date the background will be green. If it is within the period of one week will be blue and two weeks will be purple and if it is more than that the background turns to pink. The user for each item can input title, description, location and a color tag to categorize each item based on his preference. The tag will be shown in the list activity. Moreover, the user has a chance to edit his item whenever he wants or delete it completely by clicking on the item and going to edit activity.

1. User can sign up or log in by using email and password.
2. If the user was logged in before automatically will go to the list item activity without doing the log in process.
3. By clicking the floating action button, the user can add a new item to the list
4. In order to add an item, title, description, tag, and location should be added
5. By dropping the marker on the desired place, the location will be set
6. By clicking on the item can edit or delete the item
7. By checking the item, item will be considered as completed task and will move to the end of the list
8. User can sign out by clicking on the action bar menu

## Lesson Learned:

This project tackled so many different fields in Android Studio. Starting with firebase, I used its database, and authentication service. Firebase real time database uses data synchronization meaning that as soon as the data changes, the database will get updated. I have a better understanding of the firebase and linking it to the app and using the data in order to perform specific functionalities for the app. Firebase made this project much easier. Moreover, I used firebase for the authentication using email and password.

In order to sort the items in the list I stored the due date as epoch time. Epoch time or Unix time is a system for describing a time as the number of seconds that has been passed since the first of January

1970. I choose epoch to be my reference point to measure the time and compare it with today's date in order to choose the list item background color. For pushing the completed task to the bottom of the list, I concatenated two array lists one for the completed items and one for the uncompleted ones.

Getting the latitude and longitude from google map was another interesting part of this project which required me to research about it in order to feel comfortable to use it in my app.

The major problem that I faced was using the toolbar and its functionality. The toolbar was not compatible with the API level used by the app. As a result, I had to test different approaches in order to have a functional toolbar.

In general, I learned different techniques and used in this project as it reflects in my application. I tried to have a proper app with decent design that makes for the user interesting and easy to use.

## Special Info:

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