



COSC2471

iPhone Software Engineering Assignment 2

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Contribution

Ning Nan :50%

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(Both focus on the same section in the same week and followed the weekly progress suggestion)

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Design Principles



Specify your requirements

Price Range (Weekly)

- \$0 +

To

- \$2000 +

Room Space

-  Any +

-  Any +

-  Any +



\$200

2 McGoun Street Richmond 3121

1  1  1 



\$400

40 Cootamundra Crescent Blackburn 3130

3  3  3 



Result



Favorites

Deference

- Contents fill then entire screen.
- Contents and tasks differ from each other with different RGB color.
- No need for user to login.
- Minimal use of bezels, gradients and drop shadows. Interface is light and airy.
- Each Scenes focus on one task.

Clarity

- Labels and texts show clearly different layers. Larger font size shows more important information.
- Icons are presenting their own meaning.
- Buttons such as full red heart icon and the border only red heart icon conveys interactivity.
- Space is never crowded.

Depth

- Use of popover reveals part of the screen to remain users when doing the sensitive operation.
- Icons on the pictures can be clickable to mark or unmark one property.

Contrast

- Most of the clickable elements in the application is using the same color which comes from the logo color. And these colors make contrast with the labels and other elements. Gives a good color feel and clearly reminds users what operations can be done next.
- Labels of the results details make contrast with each other, price label will be bigger as most people consider about price first.

Repetition

- For all the lists, Result, Favorite and My Property List, the properties will be displayed in cells. And cells share the same layout and icons.
- Users do not need to learn much as senses are often using the same design.
- Colors of buttons are all using same color.

Alignment

- For all the cells that display properties. Labels are fixed position in every cell. And align with edges or each other. If users only focus on one attribute of the property, they can simply focus on one point on the screen and scroll down.

Proximity

- For all the cells, attributes belong to the same property will always be tightened together. And different cells have different contents.

Design Patterns

Delegation

```
protocol DatabaseOperations{

    func queryDatabase(operation: String) -> FMResultSet?
    func modifyDatabase (operation: String) -> Bool
}

class DatabaseOperation : DatabaseOperations{

    func queryDatabase(operation: String) -> FMResultSet?{

        if(!database.open()){

            print("Error: \(database.lastErrorMessage())")

            database.close()
            return nil
        }
        else{

            let rs = database.executeQuery(operation, withArgumentsIn: [])

            return rs
        }
    }

    func modifyDatabase (operation: String) -> Bool{

        if(!database.open()){

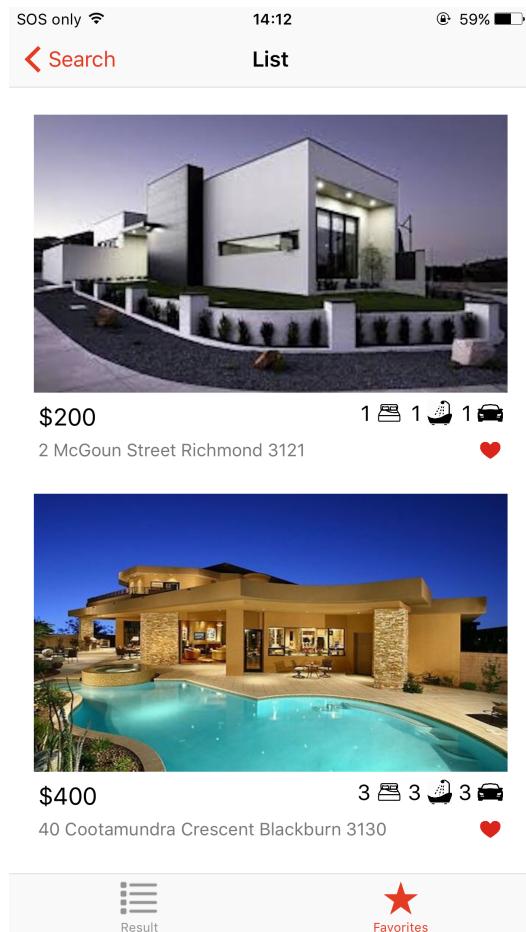
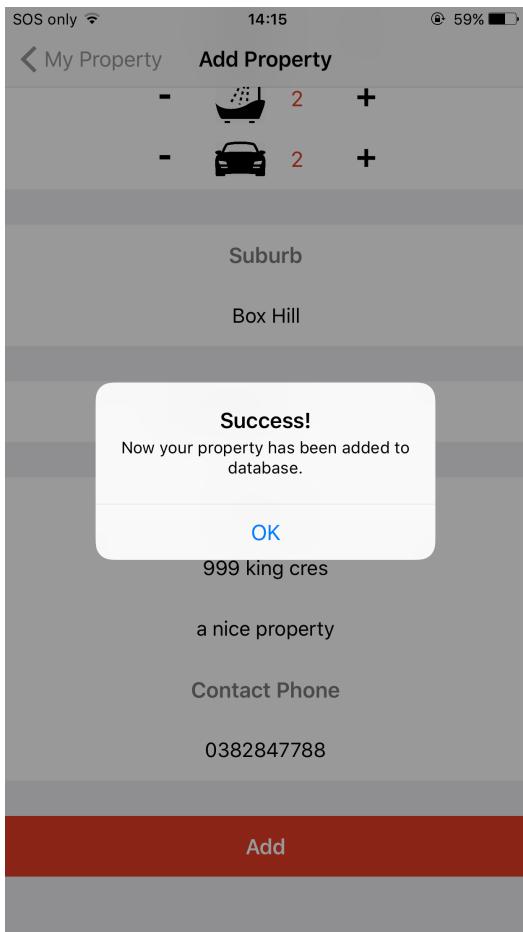
            print("Error: \(database.lastErrorMessage())")

            database.close()
            return false
        }
        else{

            let rs = database.executeUpdate(operation, withArgumentsIn: [])
            database.close()
            return rs
        }
    }
}
```

- Protocol and Class as above. DatabaseOperation Class contains the basic database operations : query and modify.
- Then one another class Model class use delegation to use the basic database operation in the above class. All of the functions that related to database has used delegation.

CRUD Operations



Create

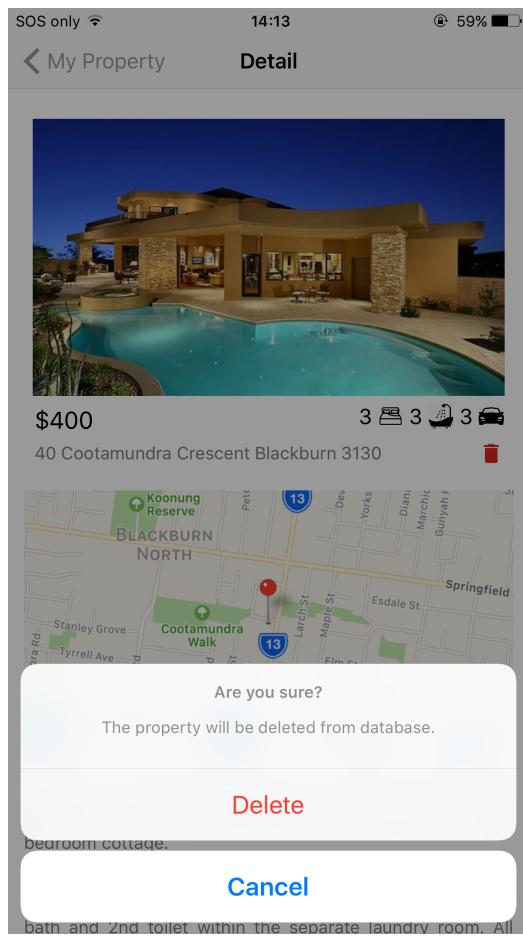
- In the landlord page, while user click to add property, and fill the blanks with no empty messages and valid information then click Add. The application will check these information first. Then the data will be added into the database by creating one row.

Read

- For all the lists(Result, favorite and owning), before the table load, the application will first read from database. Then display in the cells. The read is automatically every time before the table loads.

Update

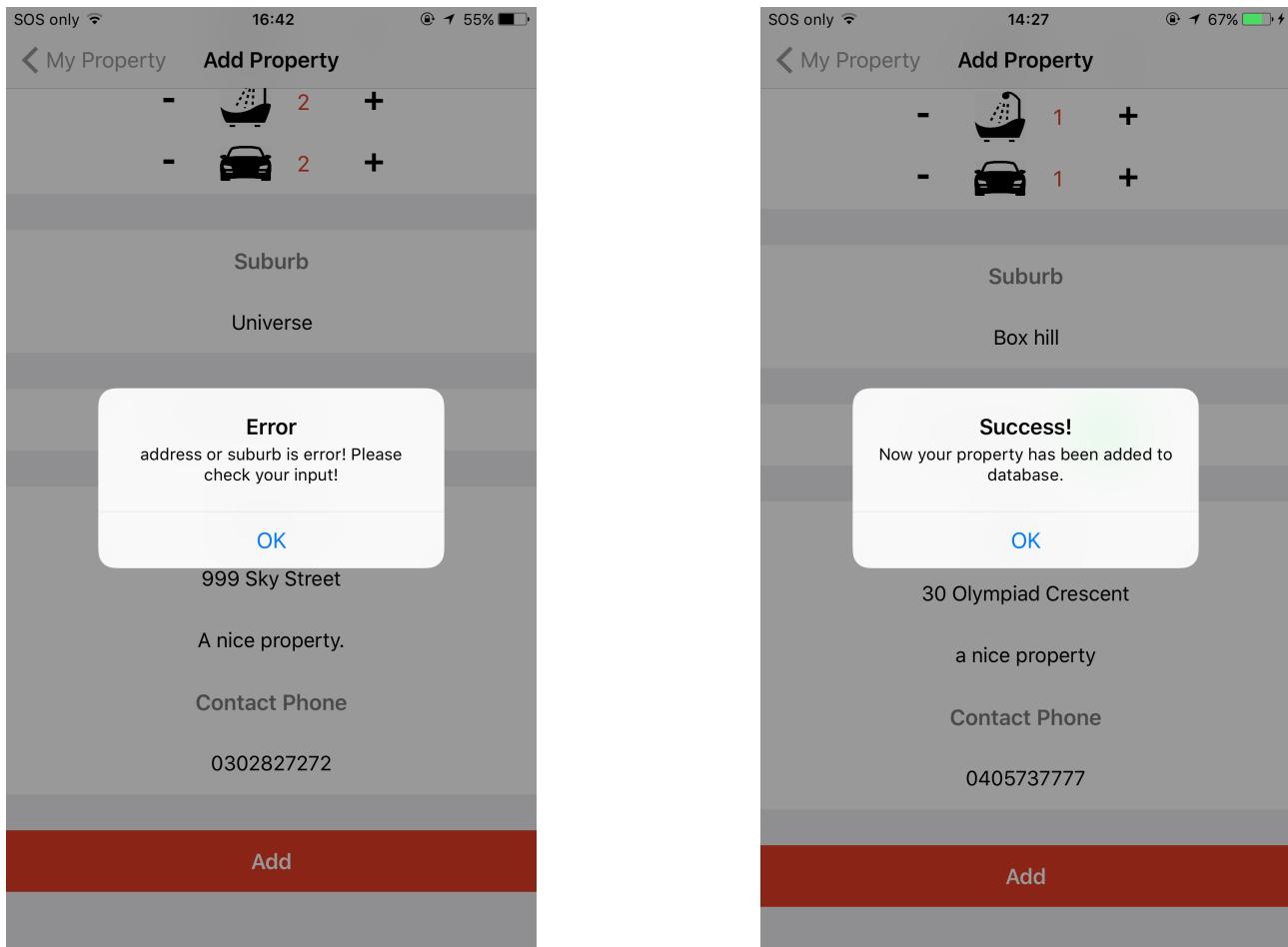
- The red heart icon just below the image shows the favorite status in the database. If users click on the icon, the icon will change to border only and update the favorite status in the database.



Delete

- While user enters the detail page as landlord, then he/she can see the favorite icon becomes delete button. If user clicks on the button, the action sheet will present. If user continue to delete, then the row of this property in the database will be deleted.

REST Implementation



REST API example request:

[https://maps.googleapis.com/maps/api/geocode/json?address=30 Olympiad Cres, Box Hill North&components=administrative_area:VIC|country:AU&key=AIzaSyD8X2n5jN8x7Rddir7FFglz0laMvNCK9fs](https://maps.googleapis.com/maps/api/geocode/json?address=30%20Olympiad%20Cres,%20Box%20Hill%20North&components=administrative_area:VIC|country:AU&key=AIzaSyD8X2n5jN8x7Rddir7FFglz0laMvNCK9fs)

Input street detail with suburb. And the limitation of VIC and AU. Return address detail, post code, coordinate and many other information about this address.

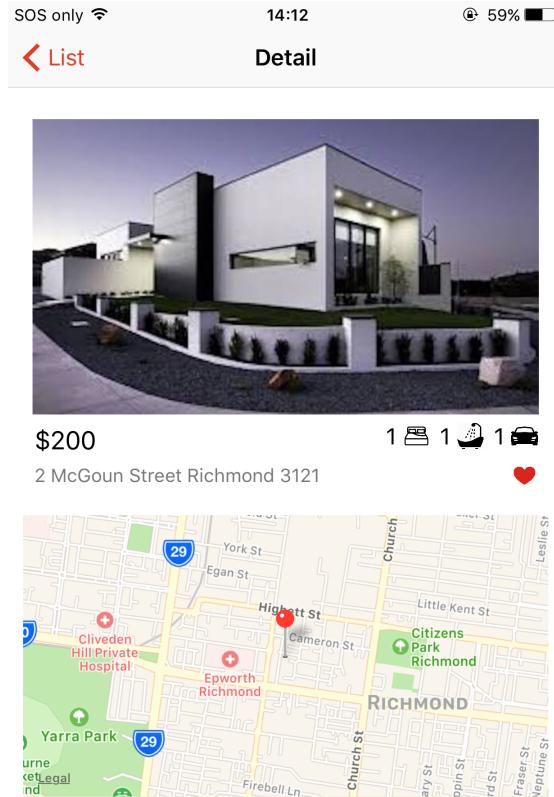
Here I will extract the post code and coordinate. If the address and suburb are not valid in the VIC. The request will return error, thus no post code and no coordinate, then the application will give error message.

If the address and suburb are valid. The coordinate and post code will be added into the database for other use.

So, my REST API Implementation is used to check the address(Not too accurate, but still effective), get post code and get coordinate(used for next chapter, map).

Cocoa Framework

Map

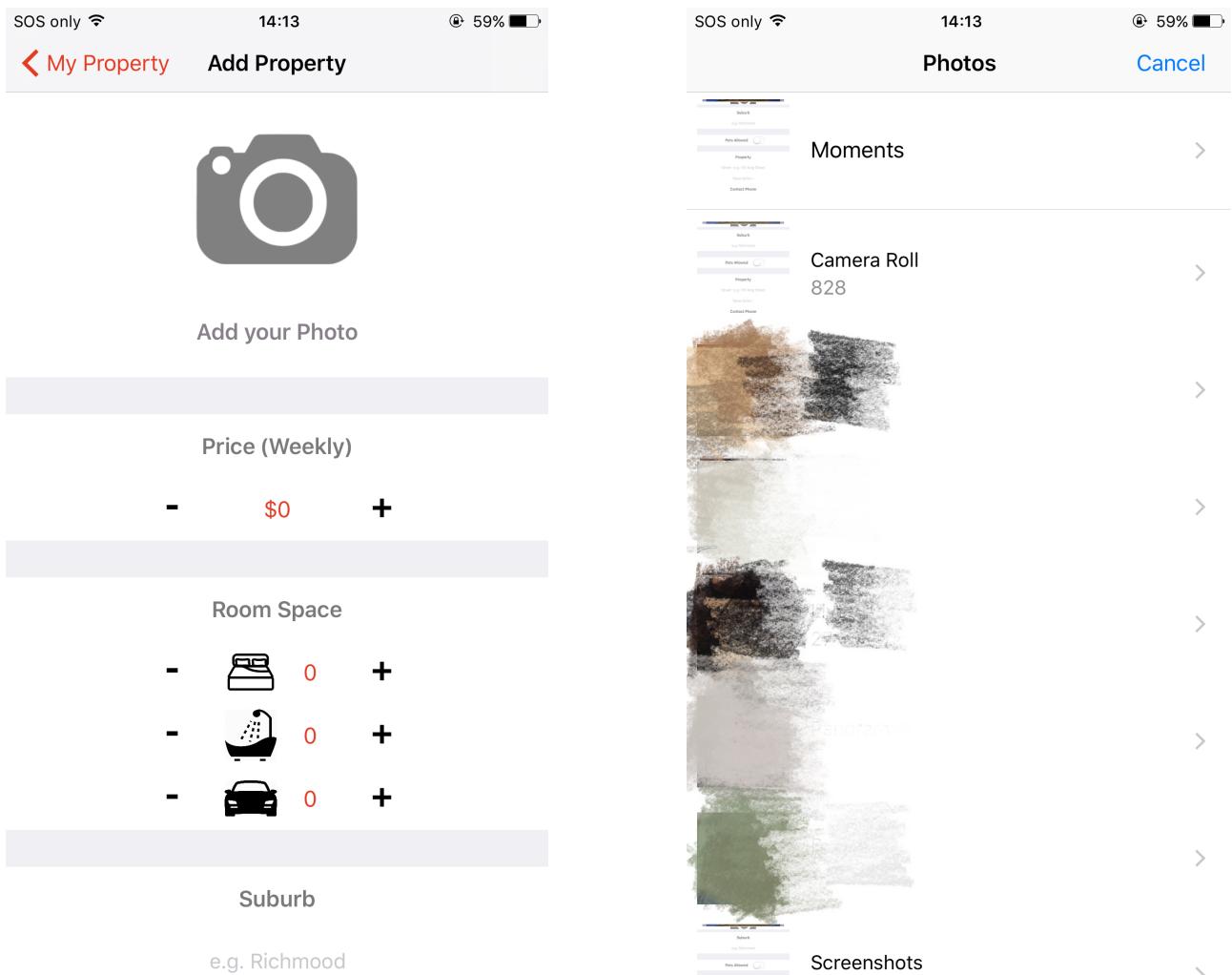


Spectacular bushland setting with harbour & City views from this beautifully presented, fully renovated three bedroom cottage.

Stunning brand new open plan kitchen fitted with glass splash backs, wine storage, induction stove and dishwasher. The brand new quality bathroom is fitted with shower over bath and 2nd toilet within the separate laundry room. All

As I mentioned last chapter, through the REST API, now we have the coordinate for the property. When the user enters the detail page, the detail page will load the coordinate from the database. And then use coordinate into the core map. Then user is able to see where the property is.

Photo



User is able to upload photos for the property. When user enters the Add Property page, they can click the photo image to choose the photo. After the photo is chosen, the photo will be displayed in the add page. And after the add operation is successful, the photo will be saved in the documents.

Size Classes



Carrier  5:50 PM  List

Search

\$200

2 McGoun Street Richmond 3121

1  1  1 



Carrier  5:50 PM  List

Search

\$200

2 McGoun Street Richmond 3121

1  1  1 



\$300

199 William Street Melbourne 3000

2  2  2 

 Favorites

- While the device is the size (w: R h: C) (iPhone 7 Plus), the icons, texts will be displayed on the right of the image.
- The normal situation is, icons, texts will be under the image.

References

FMDatabase: <https://ccgus.github.io/fmdb/>