



The University of the West Indies

Department of Computing and Information Technology

Undergraduate Project Course | **INFO 3604**

Timeline and Use Cases Document

Project Name: **QuickRental**

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Project Objective: *To optimize and revolutionize the decision making process involved in finding the ideal apartment and make tenants in the St Augustine area happier with their choice of apartment.*

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1. Work Breakdown Structure

1.1 Project Deliverables

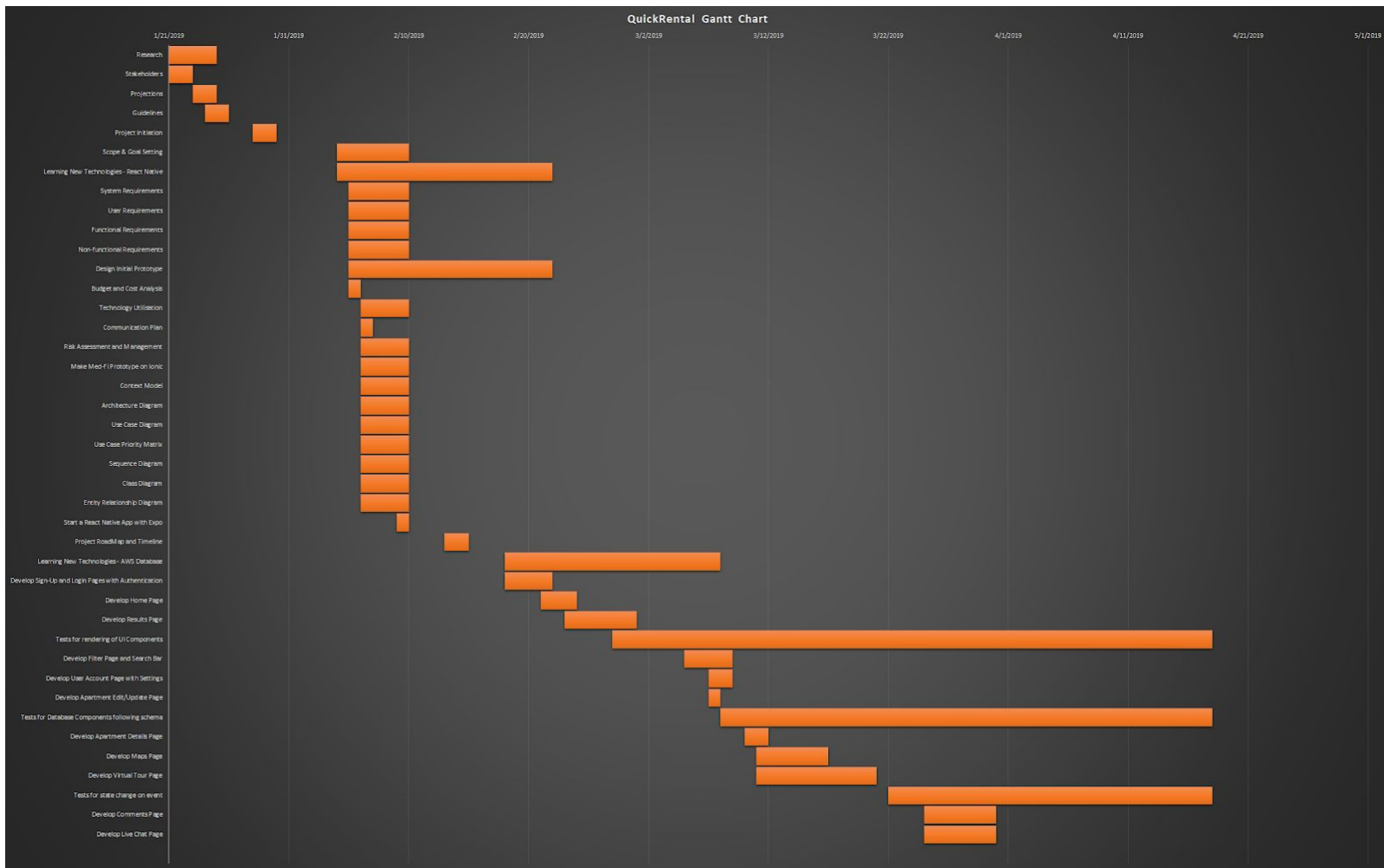
- Develop a detailed plan and breakdown of all tasks to be done for QuickRental.
- Conduct survey on tenants of UWI to determine/quantise their satisfaction with their current apartments, and need for an improved searching method by January 30th.
- Develop a React Native app for Android and iOS, containing a searchable index of apartments by April 2nd. To accomplish this:
 - Develop the structure of the database to store, query, edit (includes add, delete, update) and sort apartment data by March 8th.
 - Database structure will allow storage of apartment details (eg. location, image links, amenities, comments) and user account information.
 - Construct user-friendly designs, based on user feedback, and further improve designs. ***This is an ongoing process, and will be performed in each iteration.***
 - Implement designs and functionality using React Native Framework by April 2nd.
 - Develop pages (home, filter, apartment listing and details (maps, virtual tour, comments, details, contact) and profile page) by March 22th.
 - Implement Google Maps API, and allow landlord to create location pins by April 2nd.

- Use database to implement CRUD functionality. Database will allow complex user queries using detailed criteria through filtering by April 2nd.
- Develop a personal direct messaging platform that allows communicating text and image between the landlord and tenants by April 19th.
- Conduct survey on completed application to determine user friendliness and overall satisfaction with application. ***This will be performed after each iteration.***
- Use feedback from survey to further improve application. ***This will be performed after each iteration.***

1.2 Decomposition of Deliverables

[Link to the Work BreakDown Structure with Gantt Chart and Resources for each Tasks](#)

1.3 Timeline - Gantt Chart (Isolated from [WBS](#))



1.4 Timeline - Product Roadmap



2. Use Cases Report

2.1 Requirements classification and organization

Group 1 - Browse Listings

- Browse for apartment listings.
- Browse for specific apartments through a filtered search.
- Like apartments.

Group 2 - Browse Details

- Browse through apartment details - Map, Virtual Tour and Comments

Group 3 - Notify

- Send real-time notifications to the user on the availability of an apartment that is bookmarked.
- Notify the user when they get a response from a landlord contacted.

Group 4 - Comment

- Add/delete comments on apartments.

Group 5 - Bookmark Apartment

Group 6 - Add Apartment

Group 7 - Update Apartment

Group 8 - Delete Apartment

Group 9 - Authenticate

Group 10 - Contact

- Live chat with landlord through Cloud Messaging on Firebase.
- Contact landlord through phone call or SMS.

2.2 Requirements prioritization and negotiation

2.2.1 Use Cases

Main actors: Tenant (Student/Staff or anyone that would like to rent near U.W.I), Landlord, Database.

Summary Use cases:

<i>Use Case ID</i>	<i>UC1</i>
<i>Use Case Name</i>	<i>Authenticate</i>
<i>Brief Description</i>	Authenticates the user and allows them access to the system.

<i>Use Case ID</i>	<i>UC2</i>
<i>Use Case Name</i>	<i>Browse Listings</i>
<i>Brief Description</i>	A user can browse apartment listing through a grid or list view as well as browse selected apartments with a specific criteria through the filtered page.

<i>Use Case ID</i>	<i>UC3</i>
<i>Use Case Name</i>	<i>Browse Details</i>
<i>Brief Description</i>	Once an apartment is selected, the user can browse through the apartment details, including the map, virtual tour and reviews for that apartment.

<i>Use Case ID</i>	<i>UC4</i>
<i>Use Case Name</i>	<i>Notify</i>
<i>Brief Description</i>	Notifies the user availability information for an apartment that is bookmarked, as well as notify the user if they received a message through the live chat with the landlord.

<i>Use Case ID</i>	<i>UC5</i>
<i>Use Case Name</i>	<i>Comment</i>
<i>Brief Description</i>	The user can post/delete a comment for a specific apartment.

<i>Use Case ID</i>	<i>UC6</i>
<i>Use Case Name</i>	<i>Add Apartment</i>
<i>Brief Description</i>	One or more apartment listings can be added by the landlord along with all the required details, photos etc.

<i>Use Case ID</i>	<i>UC7</i>
<i>Use Case Name</i>	<i>Update Apartment</i>
<i>Brief Description</i>	One or more apartment listings can be edited from the system via interaction through the app on the Landlord's apartment listings page.

<i>Use Case ID</i>	<i>UC8</i>
<i>Use Case Name</i>	<i>Delete Apartment</i>
<i>Brief Description</i>	One or more apartment listings can be deleted from the system via interaction through the app on the Landlord's apartment listings page.

<i>Use Case ID</i>	<i>UC9</i>
<i>Use Case Name</i>	<i>Bookmark Apartment</i>
<i>Brief Description</i>	A user can bookmark an apartment to view at a later time.

<i>Use Case ID</i>	<i>UC10</i>
<i>Use Case Name</i>	<i>Contact Landlord</i>
<i>Brief Description</i>	The user can contact the landlord via SMS, a phone call or live chat through a messenger platform.

2.2.2 Priority Matrix Ranking

Ranking criteria used to evaluate the use cases on a 1-5 scale on these 6 criteria:

1. Significant Impact on the architectural design.
2. Easy to implement but contains significant functionality.
3. Includes risky, time-critical, or complex functions.
4. Involves significant research or new or risky technologies.
5. Includes primary business functions.
6. Will increase revenue or decrease costs.

<i>Use-Case Name</i>	<i>Ranking Criteria, from 1 to 5</i>						<i>Total Score</i>	<i>Priority</i>
	1	2	3	4	5	6		
Add Apartment	5	5	3	2	5	5	25	High
Browse Details	5	3	5	5	4	2	24	High
Browse Listings	5	5	2	2	5	3	22	High
Contact	2	3	4	4	4	3	20	High
Authenticate	5	5	3	1	5	1	20	Medium
Notify	4	4	2	1	4	3	18	Medium
Update Apartment	4	4	1	1	3	3	16	Medium
Delete Apartment	4	4	1	1	3	3	16	Medium
Bookmark Apartment	3	4	1	1	3	1	13	Low
Comment	3	3	1	1	2	3	13	Low

2.3 Use Case Diagram

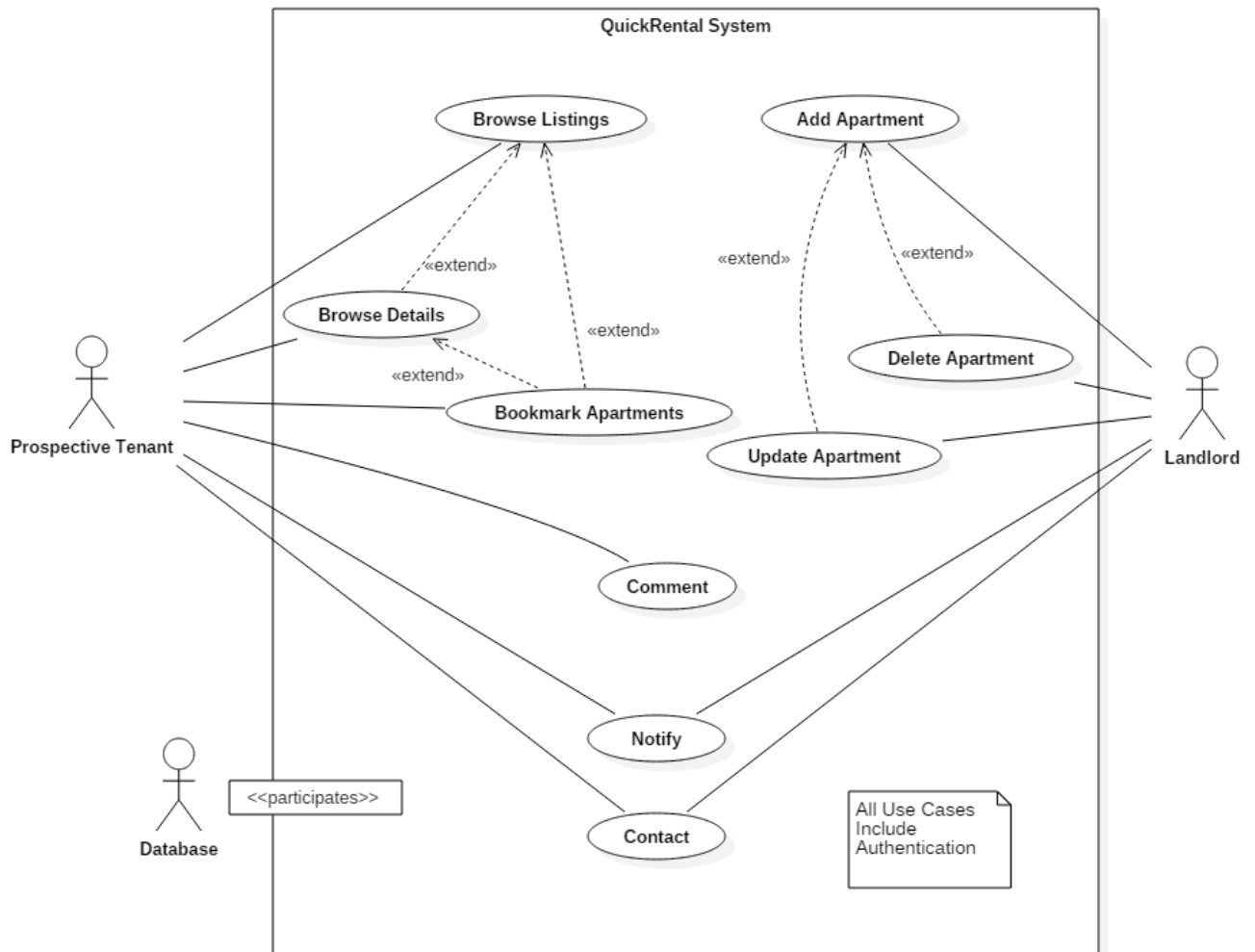


Figure 1: Use case Diagram for QuickRental

2.4 Sequence Diagram for Add Apartment

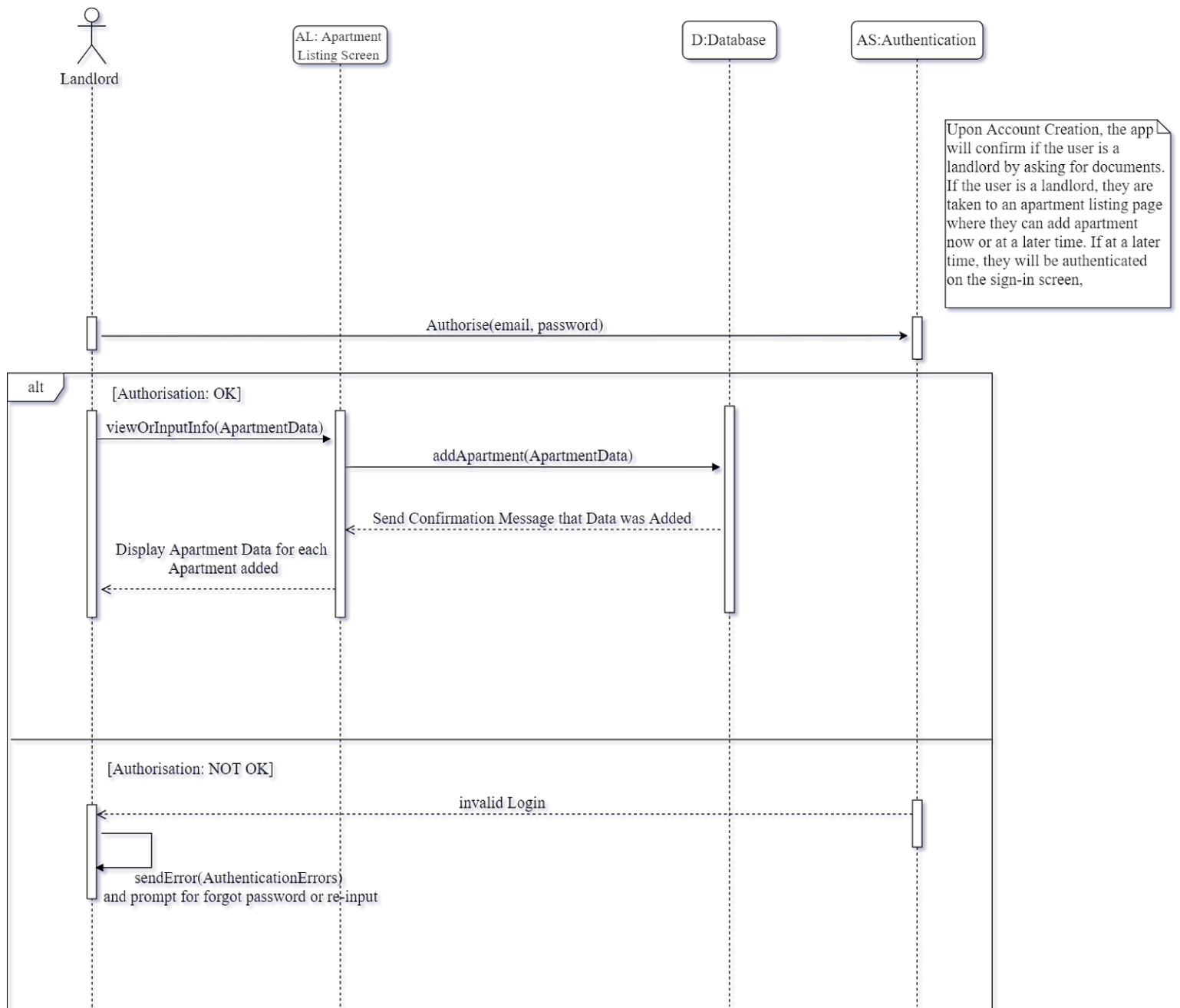


Figure 2: Sequence Diagram for the highest priority use case, Add Apartment, for QuickRental