Project Initiation Document: Apartment Rent Bidding System

Project Information

Project Name: Apartment Rent Bidding System
Submission Date: September 27, 2022
PID Version: 1.0
Client: Damen Tomassi

Project Team

Team Member	Role	Responsibilities
Gregory Zacharko	Product Owner	Manage Product Backlog; Communicate with Sponsor; Optimize the Value of the Product; Common Terms and Definitions; Project Methodology; Proofread PID
Lucas Adams	Scrum Master	Scrum Meetings; Acquiring Materials; Team Management; Communications; Trello Chart Management; Burn-Up Chart; Project Requirements
Emma Dougherty	Development Team	Project Diagram; Defining Success; Research bubble.io; Research Figma, Balsamiq, and AdobeXD for GUI Wireframe
Sara Torres	Development Team	Project Risks, Constraints, and Feasibility; Develop Stringent Team Communication Strategies; Become Familiar with bubble.io, Figma, and AdobeXD
Alizsa Johnson	Development Team	Project Scope and Definition

Project Scope and Definition

The Apartment Rent Bidding System is a Web application that allows apartment administrators to auction off apartment units to potential renters.

The administrators create apartment buildings, populate those buildings with apartment units, and set the minimum going price and bid rate. The apartment administrator gives the bidders the apartment unit ID. Then the bidders start placing bids and continue bidding until the auction ends. At the end of the auction, a winner is selected and both the winning bidder and the apartment administrator are notified.

The scope of the Apartment Rent Bidding System is to create a Web application where apartment administrators can hold auctions for apartment units and invite bidders to bid on the rent.

For Administrators

- Allow administrators to sign up for a special user account that allows them to create apartment buildings and display available units.
    - Once an administrator creates an apartment unit, it is assigned a unique identifier that is visible to the administrator. This identifier allows approved bidders to access the auction.
- Allow administrators to set the minimum bid and minimum bidding increment.
- Allow administrators to add apartment details such as lease length and amenities.

For Bidders

- Allow bidders to sign up for an account that lets them participate in auctions.
- Allow bidders to bid on apartment units.
- Allow bidders to use an auto bidding feature, where they set the max amount they'd like to spend and the bidding system will bid on the users behalf until no other competing bids are placed or until the bidders max price is reached.
- Allow bidders to be notified when they've been outbid and when they've won the auction.

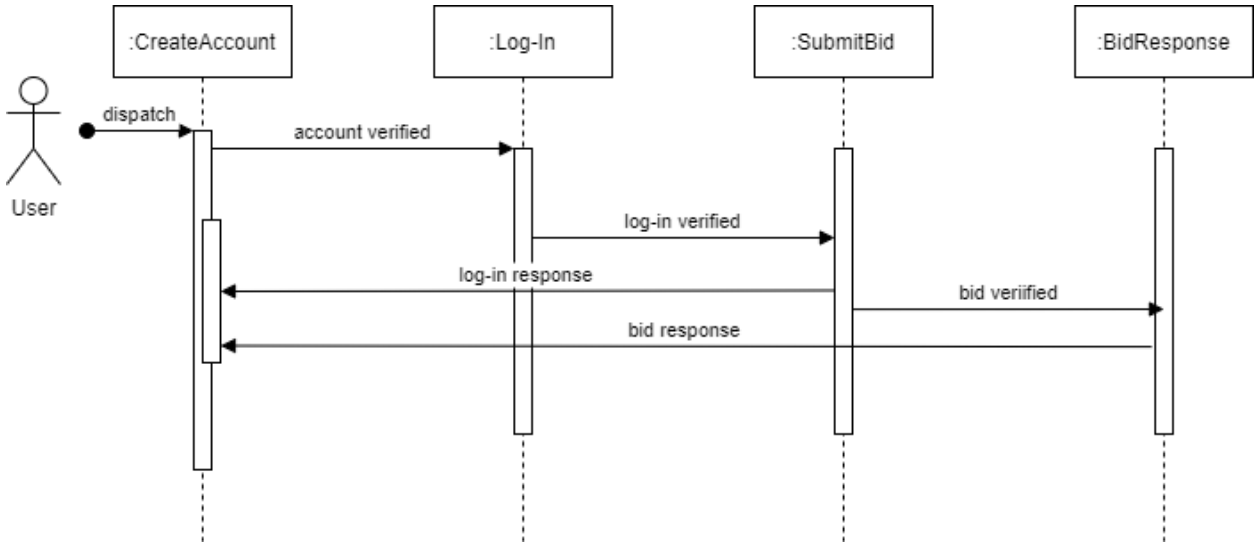
Deliverables

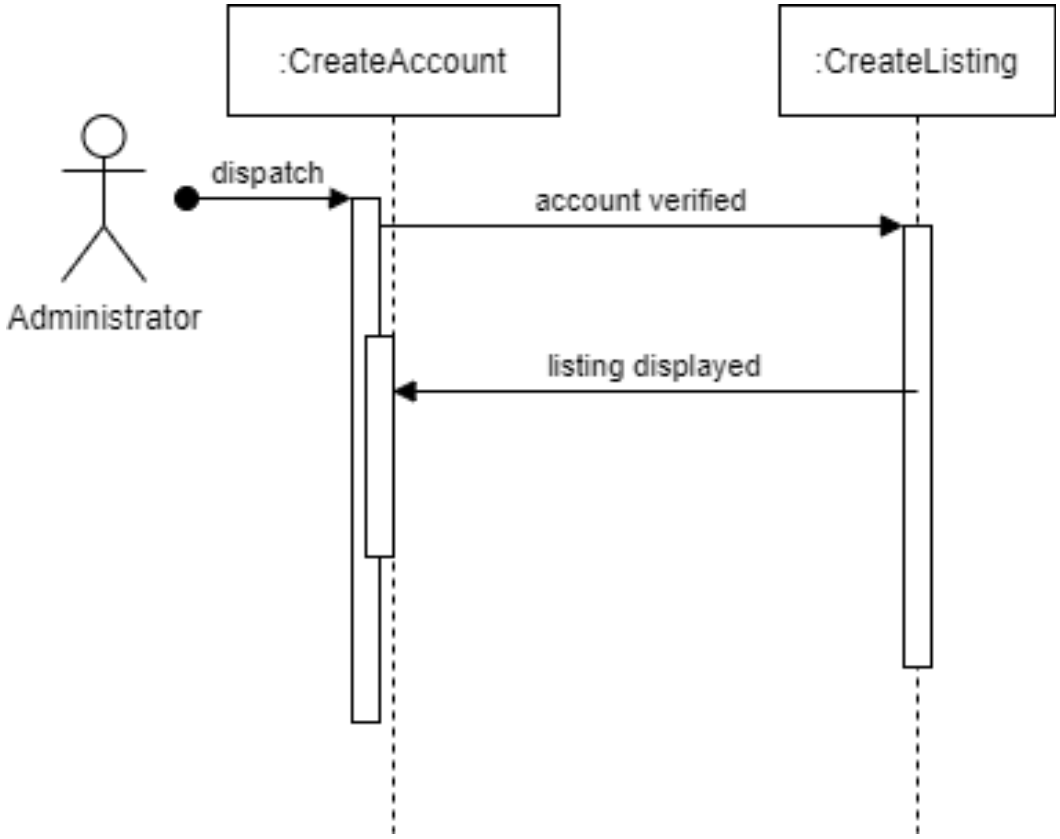
- A fully functional Web application that allows apartment administrators to auction off apartment units and allows bidders to access and participate in the auctions.

Common Terms and Definitions

1. SPONSOR: The owner/stakeholder of the product.
2. PROFESSOR: Third-party overseer of the project and the team developing it.
3. ADMINISTRATOR: A person that creates a listing for an apartment unit using the product.
4. BIDDER: A person that uses the product to bid on an open and available apartment unit.
5. APARTMENT UNIT ID: A randomized, unique sequence of letters and numbers that bidders use to access the specific apartment listing they want to bid on.
6. BUBBLE.IO: A software engineering platform that allows developers to quickly build high-quality, fully functioning, powerful desktop/Web and mobile applications without having to type out thousands of lines of code.

Project Diagram





Project Methodology

For this project, the team will use an Agile methodology, with Scrum and Incremental Development being the framework. As such, the team uses artifacts, like a Product Backlog and Sprint Backlog, to track progress and organize requirements and features. The team is organized into 3 distinct roles: the Product Owner, the Scrum Master, and the Development Team. With the team consisting of 5 people, there is 1 Product Owner, 1 Scrum Master, and 3 members of the Development Team. The sponsor and the team review the progress of the project via the Trello Board. Through Scrum events like Sprints and the Daily Scrum, the team produces increments of the product throughout the development cycle. The length of a Sprint is about 2 weeks. After 5 Sprint cycles, the team presents the final product increment to the sponsor.

The main methods of communication within the team are through Discord as well as Zoom and in-person meetings. The team meets in-person at least twice a week. The team conducts Daily Scrum meetings daily, which may be in-person or via Zoom/Discord. The sponsor and the team communicate between each other primarily through e-mail and meetings on Zoom. The team obtains guidance on the project

through the sponsor and the professor. Zoom meetings between the team and the sponsor occur when needed as well as after each Sprint. At the post-Sprint meeting with the sponsor, the team presents the completed increment from that Sprint.

The team makes most decisions as a team, getting input from every team member. This philosophy especially goes for bigger decisions about the project. Some decisions may arise within a team member's specific sphere of responsibility, like with the Product Owner and managing the Product Backlog for example. In such situations, the individual may decide on their own, without asking the whole team for their thoughts. However, the team wants to limit situations where not all of the team members say their thoughts on a possible decision.

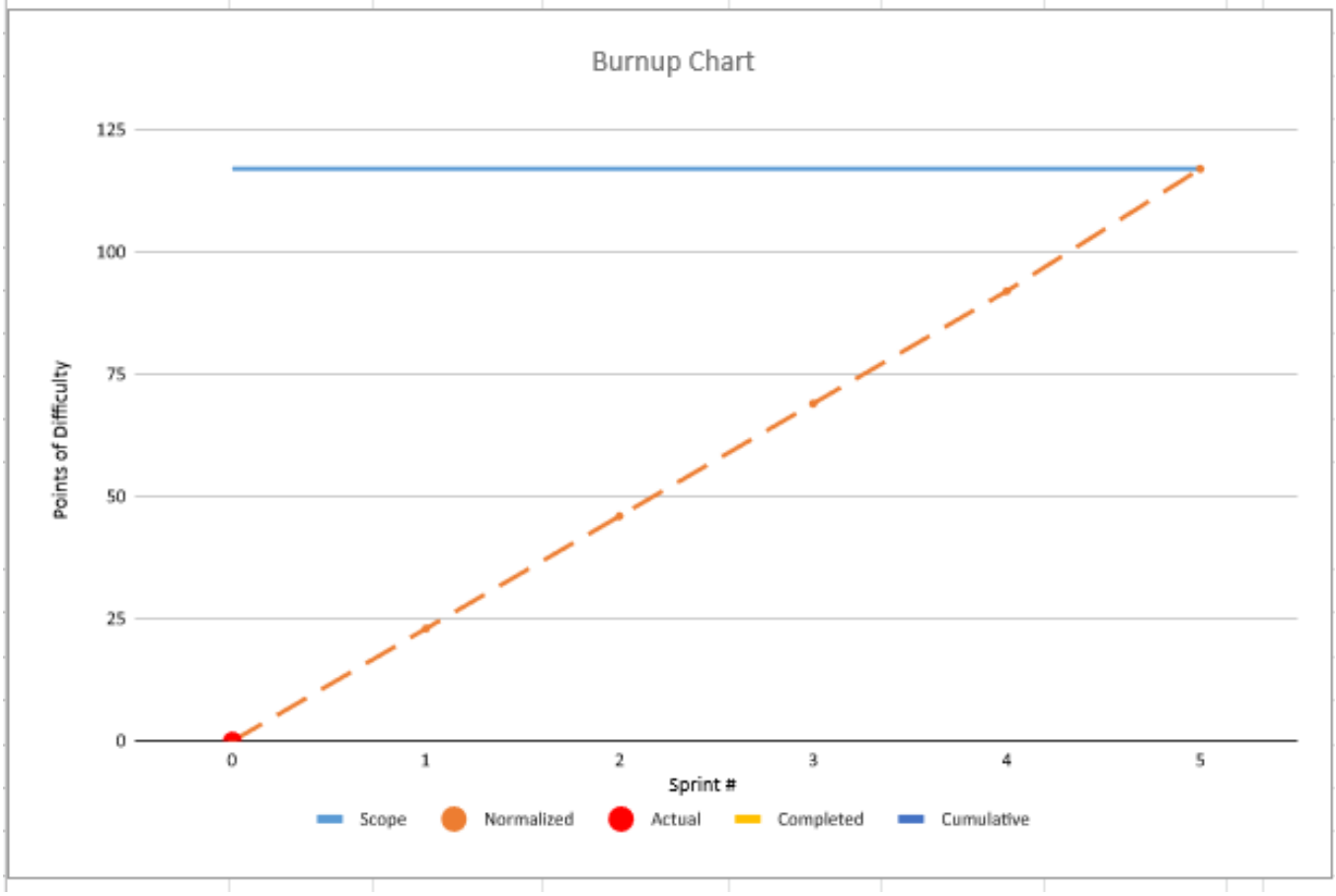
Project Requirements

https://trello.com/invite/b/SOTVVaoh/cbde2009156fc799d7497213d6dc2656/axolotls

The Trello Board, linked above, tracks the progress of the project with input from each member of the team. The Product Owner creates cards representing different requirements and features of the product. The cards contain user stories, acceptance criteria, and check-list tasks. These cards are put in the "Product Backlog". Once completed, the team discusses together the potential cards to move to the "Sprint Backlog". Items are then moved into the "To Do" section based on importance and when it is needed. If the card moves forward it goes into "To Do", which is a waiting area for cards until the Development Team picks them up. The card shifts to "In Progress" while it is being worked on. Once fully completed, the Development Team members move the card into the "Done" section, and take another, repeating until every card is complete.

Burn-Up Chart

Sprint	0	1	2	3	4	5
Scope	117	117	117	117	117	117
Estimated	0	23	46	69	92	117
Completed	0	#N/A	#N/A	#N/A	#N/A	#N/A
Cumulative	0	#N/A	#N/A	#N/A	#N/A	#N/A



Project Risks, Constraints, and Feasibility

Early Possible Risks:

- Too many decision makers, which can cause bottlenecks in the decision making and approval process.
- Underestimation of the time/resource commitment. The project seems to be easy enough to finish on time (over 5 Sprint cycles), but completing it within that time

frame is only guaranteed if we do not underestimate the time we have from the beginning.
- Team turnover. Communication and reporting the status of the project needs to be ensured, as well as be clear, up-to-date, and accessible for everybody.

Late (In Progress) Possible Risks:

- Scope creep. This is where project features are being requested that did not form part of the original brief, and can not have reasonably been expected to be included.
- Perfectionism. 90% of a feature is good enough if delivering on that last 10% is going to take extra hours that can affect the deadline.
- Not giving enough time to the testing phase, to fix “bugs” and issues.
- If we use bubble.io, there is a risk it will not be able to integrate properly with 3rd party systems.
- Data migration and population.
- Cross-platform compatibility. If we make a website we have to make sure it looks and functions perfectly on every version of every browser on every screen size and orientation (portrait or landscape).
- Poor quality of the end product.

In general, the idea of the project we are planning to execute does not have a limitation that will not allow us to complete it. Therefore, we foresee a successful project.
Some of the risks mentioned are highly important to be aware of and others are lower risk since they can be fixed relatively easily.

How is Success Defined?

Success for our team is defined by a functioning Graphical User Interface (GUI) that allows both an administrator and user to enter information in the Apartment Rent Bidding System. An administrator would be able to upload information about a specific apartment such as price, pictures of the apartment, and other specifications. A user would be able to create an account and log in to a specific area in which the desired apartment would be listed. The user could then place a bid on the apartment and be notified if their bid was accepted.

In order for these functionalities to perform accordingly, certain measures of success would need to be met. This includes completion of all tasks on the Trello Board in the designated period of time. Along with this, the Burn-Up Chart displays a measure of success based on the timeline of the project and the completion of tasks. Most

importantly, the sponsor serves as a measure of success in whether they approve of the final product.

To ensure product quality, testing should be performed by the Development Team. This includes unit testing, integration testing, and acceptance testing. Test procedures should be written to ensure each element of the GUI is tested and functions as a whole. Along with this, the entire team should approve of the product's functionality and capability before finalizing the product with the sponsor. The product should also be tested to meet the product requirements. This includes both the user requirements and the system requirements.