American International University-Bangladesh (AIUB)

Department of Computer Science

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Section: A/ B

Software Quality Assurance and Testing

Online House Renting System

A Report submitted

By

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Software Test Plan

for

<Online House Renting System>

Version 1.0 approved

Prepared by <Sakibur Rahman, Simit Jahin Megh, Shohan Haque, Amatul Wahid Prottasha>

<American International University, Bangladesh>

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Revision History

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0.1	09/05/2024	Sakibur Rahman	First Draft
0.2	09/05/2024	Shohan Haque	Second Draft
0.3	10/05/2024	Simit Jahin Megh	Third Draft
0.4	10/05/2024	Amatul Wahid Prottasha	Final Draft

1. TEST PLAN IDENTIFIER:RS-MTP01.3
2. REFERENCES

[1] Hayat, A. (2021, July 8). Rents: The prop-tech startup that makes renting simple. The Business Standard.https://www.tbsnews.net/features/panorama/rents-prop-tech-startup-makes-renting-simple-271885. Accessed on 10 April, 2024

[2] Ahmed, K. S. F. (2020). Tenants' troubles put stress on landlords. The Business Standard. https://www.tbsnews.net/bangladesh/tenants-troubles-put-stress-landlords-157702. Accessed on 18 April, 2024

[3] Ali, Y. (2016). Rent a home: a cross platform mobile application to list and search rental homes.

3. **INTRODUCTION**

Problem Background

Rent A House platforms have expanded in Bangladesh with the aim of facilitating house rentals [1]. Despite the presence of multiple local platforms such as bproperty, thetolet, Rents.com.bd and bdhousing, these platforms have struggled to gain widespread popularity and acceptance among users. In this situation, it is important to identify the existing problems in these platforms and take necessary steps to enhance their effectiveness and usability in the local market. The phrase "Online House Renting System" denotes digital platforms or websites that ease the process of listing, searching, and renting residential properties for either short-term or long-term durations [3]. These platforms operate as mediators, facilitating property rental transactions by connecting house owners and tenants through a digital marketplace.

Rent-a-house platforms in Bangladesh face various significant difficulties. Despite the growing demand for rental properties in urban areas of Bangladesh, the fragmented nature of the rent-a-house platform market associated with various issues has hindered the growth and adoption of these platforms [2]. This problem is crucial to consider due to its implications for both users and stakeholders involved in the rental property market. By examining these disparities and recommending enhancements, the research aims to provide insights into how these platforms can be improved to better serve the needs of users and stakeholders in the local market. Through a comparative analysis, the research seeks to identify the specific areas where these platforms fall short and propose actionable recommendations for enhancing their functionality, usability, and overall user experience.

Solution to the Problem

To enhance rent-a-house platforms in Bangladesh, several strategies can be adopted. First and foremost, improving the platform's user interface is crucial. By making it intuitive and easy to use, both landlords and tenants can navigate the platform effortlessly. Additionally, given the widespread use of smartphones in the country, developing mobile apps can significantly improve accessibility. Providing content and support in both Bengali and English will cater to a wider audience and ensure inclusive. Trust is paramount in rental transactions, so implementing user verification processes and enabling user reviews can build credibility. Integrating local payment methods will streamline transactions and ensure security. Offering robust customer support and gathering user feedback will further improve the platform's functionality. Finally, forging partnerships with real estate agencies and government bodies can enhance listings and ensure regulatory compliance. These measures collectively aim to simplify the rental process and improve user experience in the local market

In our study, we have identified numerous shortcomings in existing online house rental systems. Specifically, we have observed inadequacies such as insufficient visual representations, lacking room size information, and a notable absence of video content showcasing the flats or apartments. Addressing these deficiencies, our project endeavors to rectify these issues and enhance the overall user experience. We are actively working to incorporate comprehensive visual content, including an adequate number of images and detailed room size information, to provide prospective renters with a clearer understanding of the property. Furthermore, recognizing the growing importance of multimedia content, we are developing solutions to integrate video presentations into the platform, offering viewers a more immersive and informative viewing experience. Through these initiatives, we aim to significantly improve the functionality and usability of online house rental systems, ultimately providing users with enhanced tools to facilitate their property search and decision-making processes.

4. **REQUEIREMNT SPECIFICATION**

4.1 System Features

1. User Registration & Authentication:

Functional Requirements:

1. Client's ought to be able to make a modern account by giving basic data such as username, mail address, and watchword.
2. The enlistment frame ought to incorporate approval checks to guarantee that all required fields are filled out accurately which the e-mail address given is substantial.
3. Clients may be required to confirm their mail address through a affirmation interface sent to the given e-mail to total the enlistment handle.

2. User profile:

Functional Requirements:

1. Users should be able to create a profile upon registration, providing basic information such as name, contact details, and optionally, additional personal details like date of birth or occupation.
2. Users should have the ability to edit and update their profile information at any time.
3. Users may have the option to upload a profile picture or avatar to personalize their profile.
4. Users should have control over the privacy settings of their profile, allowing them to choose what information is visible to others.

3. System login:

Functional Requirements:

1. The login form should include validation checks to verify the correctness of the login credentials provided by the user.
2. Users should have the option to recover their passwords in case they forget them.
3. Invalidate session tokens or cookies upon logout to ensure that users are logged out securely.
4. Allow users to enable or disable MFA based on their security preferences, with appropriate guidance on how to set up and use MFA methods.

4. Comprehensive Property Listings:

Functional Requirements:

1. Each property listing should include essential details such as the type of property (apartment, house,etc) number of bedrooms and bathrooms, square footage, and floor plan layout.
2. High quality photographs should be provided including, interior and exterior views, to give users a clear understanding of the property's appearance and condition.
3. Descriptive language should be used to paint a picture of the property and its surroundings, helping users envision themselves living there.
4. Contact details should be provided for the property manager, landlord, or leasing agent, including phone number, email address, and any preferred contact methods.

5. Advanced Search Filters:

Functional Requirements:

1. Allow users to filter search results by property type, such as apartments, houses, condos, or townhouses.
2. Enable users to search for properties based on location criteria, such as city, neighborhood, ZIP code, or proximity to a specific address or landmark.
3. Allow users to specify the desired number of bedrooms and bathrooms for the property, filtering search results accordingly.

6. Messaging & Communication:

Functional Requirements:

1. Provide a messaging interface within the platform that allows users to send and receive messages securely.
2. Allow users to compose messages to landlords, property managers, or other users directly from within the platform.
3. Provide separate folders or tabs for users to view their inbox, sent items, and other message folders.

7. Secure Payment processing:

Functional Requirements:

1. Integrate a reputable third-party payment gateway provider to handle payment transactions securely.
2. Implement industry-standard security measures to protect against unauthorized access, data breaches, and fraud.
3. Implement mechanisms for verifying the authenticity of payment transactions, such as address verification (AVS) and card verification value (CVV) checks.

8.Admin Dashboard:

Functional Requirements:

1. Provide options for searching and filtering user accounts based on criteria such as username, email address, or user role.
2. View and manage property listings, including adding new listings, editing existing listings, and marking listings as available or unavailable.
3. Provide options for viewing message threads, responding to user inquiries, and resolving communication issues.
4. Generate and view reports and analytics data related to platform usage, user activity, property listings, and payment transactions.

4.2 System Quality Attributes:

Non-Functional requirements:

- **Security:** Make sure that user data, such as personal information and payment details, is safeguarded from unauthorized access, data breaches, and other security risks. Implement encryption methods, access restrictions, and reliable authentication measures to protect sensitive data. Consistently perform security audits and penetration tests to discover and rectify potential weaknesses.
- **Reliability:** Make sure the system functions dependably and steadily, with minimal interruptions and downtime. Put in place strategies like having multiple server infrastructures, automatic backup systems, and fail-over mechanisms to reduce the chance of service interruptions. Closely observe system performance and reliability metrics to promptly detect and resolve any potential issues.
- **Performance**: Must be guaranteed by the platform with quick load times and interactive user interfaces. Improve code, database queries, and server configurations to reduce delay and increase data processing speed. Perform performance testing in different load situations to guarantee scalability and responsiveness, including during high usage times.
- **Scalability:** Ensure that the platform can expand smoothly as the number of users and amount of data increase. Utilize both horizontal and vertical scaling techniques to handle growing traffic and workload requirements. Track system performance metrics and make real-time adjustments to resource allocation to keep performance at its peak.
- **Usability:** Design the platform so that it has a user-friendly interface and intuitive navigation to make it easy to use for all users. Carry out user testing and collect feedback to pinpoint areas that need enhancement and enhance the user experience. Give precise guidance, informative tool-tips, and context-specific support options to aid users in effectively finishing tasks.
- **Accessibility:** Make sure the platform can be used by people with disabilities, including those who rely on tools like screen readers or keyboard controls. Create user interfaces for all users with semantic markup, keyboard navigation, and alternative text for images and multimedia. Follow accessibility guidelines like WCAG to guarantee equal access and inclusive for all users.

And the last one is developer perspective . There are important primary quality attributes to developer perspective:

- **Maintainability:** Make sure the code-base is properly structured and simple to comprehend, enabling smooth modifications and improvements. Establish coding standards, best practices, and documentation guidelines to ensure consistency. Utilize design patterns and architectural principles to reduce dependencies and enhance the maintainability in the long run.
- **Flexibility:** Create the platform with the ability to easily customize and adapt to evolving needs. Develop customization features, add-obs, and connections to expand capabilities without altering the original code-base. Encourage the use of interchangeable parts and reduce dependencies to ensure the platform remains relevant in the future.
- **Testability**: It should be a priority, so design components with testing in mind to make it easier. Develop automated testing frameworks, unit tests, and dependency injection to separate components and replicate external dependencies. Simplify the process of writing and conducting tests that can be repeated.
- **Scalability:** It must be guaranteed to allow the platform to expand both horizontally and vertically to manage higher levels of demand. Utilize scalable architectural patterns like micro-services and distributed computing. Use scalable database technologies, caching mechanisms, and content delivery networks to achieve the best performance.

4.3 System Interface

Front Page

Figure: Registration

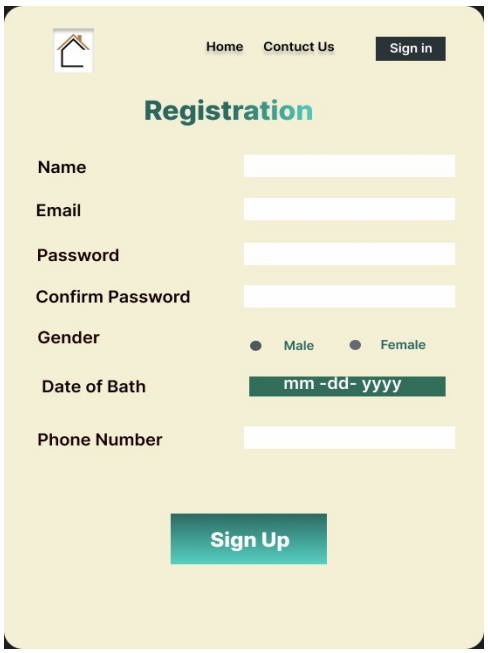


Figure: Homepage

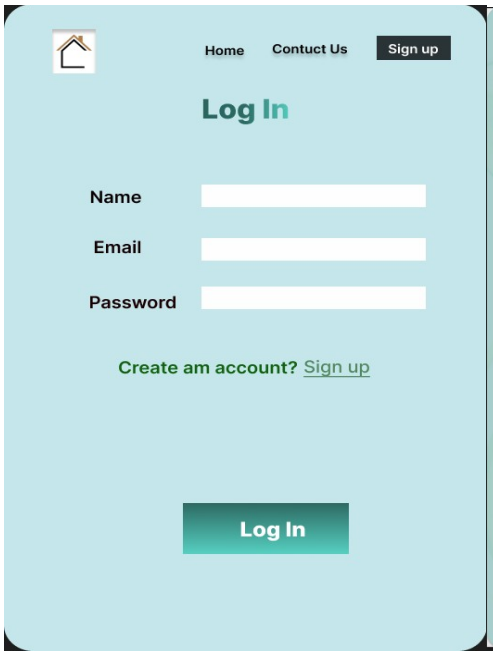


Figure: Login

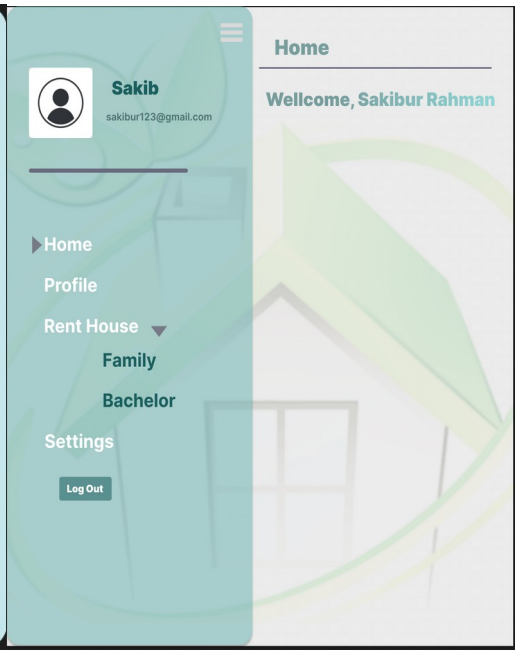


Figure: Rent House

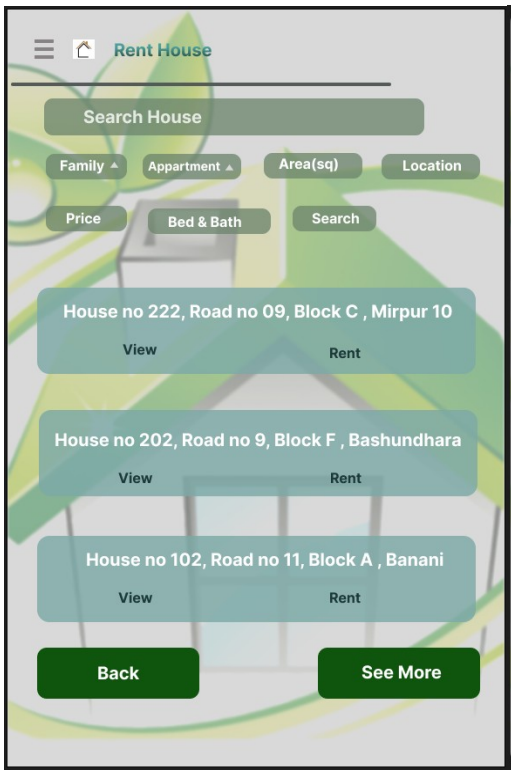


Figure: View House

Figure: Profile

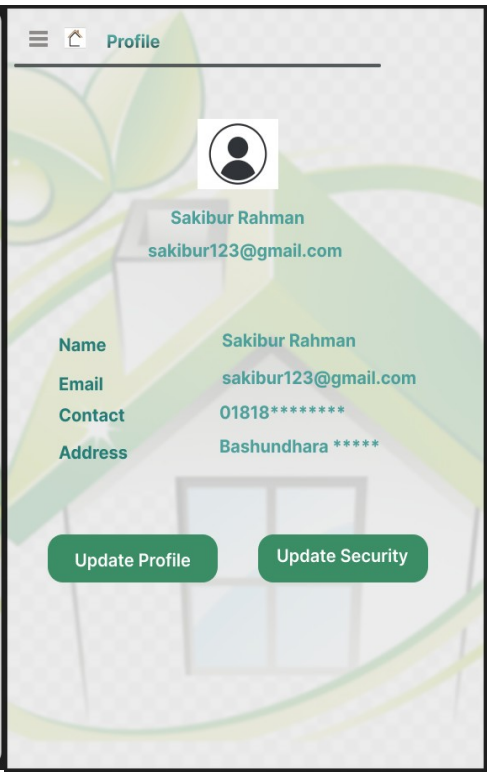


Figure: Payment

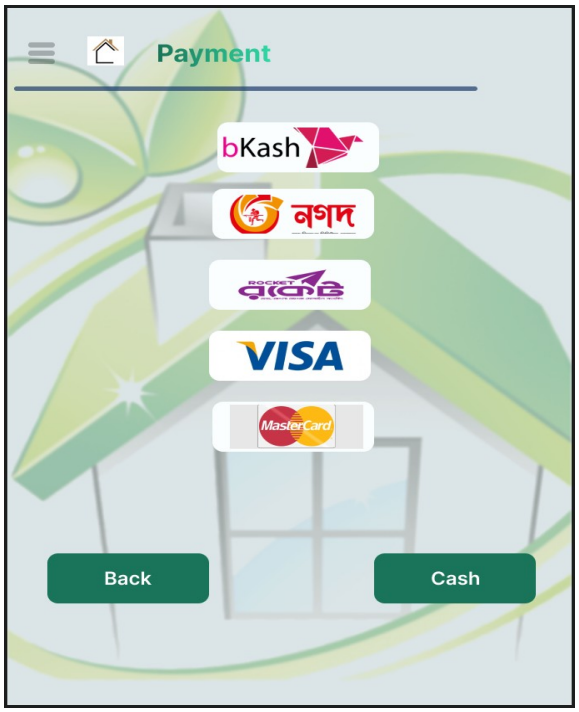


Figure: Cash Payment

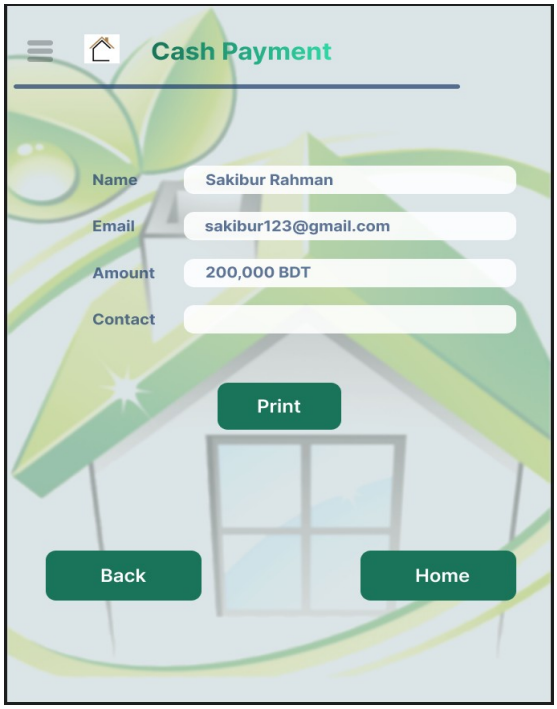


Figure : Log Out

4.4 Project Requirements

Delivering the product on schedule, within budget, and with the required level of quality is our main objective in project management activities.

Time, Cost, Scope, Resources, and Environment are the key obstacles.

We must complete our work by the deadline, on schedule, and within our allocated budget. We must also add the necessary functionality to the system. We must maintain and effectively manage the necessary resources. If we appropriately manage each constraint, a nice result will be obtained.

- By 14 weeks, a practical answer ought to be available.
- The program shouldn't consume more than 100 mb of storage after installation.
- Although developers prefer Visual Studio code, they can also use alternative editors.
- Git will be the de facto code management and version control system.
- The source code will be kept on GitHub, where many developers will work together.
- Unit testing will be done with Selenium.
- Unit testing will be done with Selenium. Interactive prototyping will be performed using a Figma.
- The estimated cost of the project is 3,50,000 BDT.

Time Estimation:
For creating prototype hours needed:100 hours. For Developing Hours needed: 880 hours. For revision hours needed: 80 hours
For testing & debugging hours needed:220 hours Total working hour :1220 hours Daily working hour: 12 hours

Total days need:1220/12=101 days or 3.5 months or 14 weeks.

Resources:
3 app developers, 3 software testers, 5 Custom Built PCs, 6 Android mobile smartphones, 5 LAN Connection.

Language & Database:
Programming Language: Java, Dart. Mobile UI Framework: Flutter, Database: MySQL.

Environment: We need an environment to build this software. So, we can create an office space.

Budget: Total budget 3,50,000 BDT. Total Development Time **3.5** Months Or 14 Weeks.

5. FEATURES NOT TO BE TESTED

All the Features in this software need to be tested

6. Testing Approach:

6.1 Testing Levels

The testing phase of our system will be divided into multiple steps. The Unit is where it all begins. The process starts with the initial testing and concludes with the security testing. There will be a minimum of one full-time position available. Individual tester for system/integration testing. Most of the testing will be conducted by the team. Manager who oversees testing with input from the development teams.

Unit Testing: This stage requires testing separate components or units of code independently. Developers create unit tests for every module, class, or function to confirm its functionality and identify issues at an early stage of the development cycle.

Integration Testing: This involves assessing how different components or modules of the system interact and are integrated with each other. It guarantees that the separate components operate as intended and interact efficiently with one another.

System Testing: This stage concentrates on testing the whole system to assess how well it adheres to defined requirements and overall performance. It includes all functionalities and user interactions from start to finish to guarantee the system aligns with user needs and business objectives.

Acceptance Testing: It evaluates the system based on end users' point of view to check if it meets their acceptance criteria and fulfills their requirements. Acceptance tests are usually carried out by stakeholders, customers, or end users.

Regression Testing: It verifies that recent code changes do not create new defects or regressions in existing functionality. It repeats tests that were performed before to ensure that current functions behave correctly following modifications in the code.

Performance Testing: Performance testing assesses how well the system performs in terms of responsiveness, scalability, and reliability when subjected to varying load conditions. It evaluates important performance measurements to pinpoint obstacles and enhance system performance.

Security Testing: It evaluates the security characteristics and weaknesses of the system in order to discover and address possible security hazards and dangers. It evaluates the system's capacity to safeguard sensitive information and deter unauthorized access, ensuring confidentiality, integrity, and availability.

6.2 Test Tools:

The only test tools to be used are the standard Selenium.

Selenium plays a crucial role in automatizing user interactions on our house rental platform within our project. Using Selenium WebDriver, we imitate user behaviors such as searching for properties and sending messages. Selenium Grid guarantees uniform performance on different browsers. It also helps with integrating testing our APIs and conducting regression testing post code modifications. Moreover, Selenium aids in user acceptance testing by mimicking common user actions, guaranteeing that usability fulfills anticipated standards. In general, Selenium boosts testing effectiveness while guaranteeing the quality and reliability of the platform.

6.3 Meetings:

Every two weeks, we schedule meetings with our tester team to guarantee synchronization and advancement in our testing endeavors. These meetings are used as checkpoints to evaluate our testing strategies, tackle any challenges faced,

and guarantee compliance with project timelines. In these meetings, we carefully review the code, examining each line to uncover mistakes, bugs, and possible weaknesses. By engaging in collaborative dialogues and receiving feedback from peers, we utilize the team's combined knowledge to pinpoint areas needing enhancement and carry out necessary changes. The bi-weekly meetings are essential for upholding the quality and dependability of our software, ensuring a smooth user experience in the end.

7. TEST CASES/TEST ITEMS

Table 1: Test Case for **Registration**

Project Name: R e n t - A - H o u s e			Test Designed by: Sakibur Rahman	
Test Case ID: RH_1			Test Designed date: 4/2/2024	
Test Priority (Low, Medium, High): High			Test Executed by: Sakibur Rahman	
Module Name: Registration			Test Execution date: 5/3/2024	
Test Title: User signup process				
Description: Test the app's registration page to see if the user can successfully register their information.				
Precondition (If any): User must give proper information.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Click on Signup button 3. Fill up the form 4. Click submit	Name: Sakib Password: Sakib@321 Email: sakibur123@gmail.com Gender: male Date of Bath: 22-10-2001 Phone number: 01823456761	User should sign up to the application	As expected	Pass
Post Condition: User is validated with database and successfully signup with account. The account session details are added in the database.				

Table 2: Test case for **Login**

Project Name: Rent-A-House			Test Designed By: Sakibur Rahman	
Test Case ID: RH_2			Test Designed Date: 4/2/2024	
Test Priority (Low, Medium, High): Medium			Test Executed By: Sakibur Rahman	
Module Name: Login Session			Test Execution Date: 5/3/2024	
Test Title: Verify login module with valid email and password.				
Description: Test the app login page to see whether the user can successfully log in to the application.				
Precondition (If Any): User must have valid email and password.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to login page 2. Enter email id 3. Enter password 4. Click on Login	Name: Sakib Email : sakibur123@gmail.com Password: Sakib@321	User should properly login to their account.	As expected,	Pass

Post Condition: User is validated with database and successfully registered into the application. The account session details are logged in the database.

Table 3: Test case for Homepage

Project Name: Rent-A-House		Test Designed By: Sakibur Rahman		
Test Case ID: RH_3		Test Designed Date: 4/2/2024		
Test Priority (Low, Medium, High): Medium		Test Executed By: Shohan Haque		
Module Name: Home page		Test Execution Date: 5/3/2024		
Test Title: Verify the accessibility in all the option.				
Description: Test all the option is functional which are in profile page.				
Precondition (If Any): User should have valid username and password.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the app Login page. 2. Put email and password and click on Login. 3. Click on Profile option. 4. Click on Rent House option. 5. Click on Family option. 6. Click on Bachelor option. 7. Click on Settings option.	Name: Sakib Email: sakibur123@gmail.com Password: Sakib@321	User should properly access all the page by clicking on them.	As Expected,	Pass
Post Condition: User log activity should be tracked properly.				

Table 4: Test case for Profile

Project Name: Rent-A-House		Test Designed by: Sakibur Rahman		
Test Case ID: RH_4		Test Designed date: 4/2/2024		
Test Priority (Low, Medium, High): High		Test Executed by: Simit Jahin Megh		
Module Name: Profile		Test Execution date: 5/3/2024		
Test Title: Test the procedure of user account information & Update				
Description: update: Verify user information update process				
Precondition (If any): User must have registered RH Name, Email & Password				
Test Steps	Test Data	Expected Results	Actual Results	Status(Pass/ Fail)
1. Open the software 2. Select Profile from Homepage section 2. Select Profile section. 3. User need to provide the necessary Information which he/she wants to update. 4. Then RH will check those data	Name: Sakib Email: sakibur123@gmail.com Password: Sakib@321	RH will successfully update user's information.	As expected,	Pass

and confirm the information update.				

Table 5: Test case for Rent House

Project Name: Rent-A-House			Test Designed by: Sakibur Rahman	
Test Case ID: RH_5			Test Designed date: 4/2/2024	
Test Priority (Low, Medium, High): High			Test Executed by: Sakibur Rahman	
Module Name: Rent House			Test Execution date: 5/7/2024	
Test Title: Test website Rent House page				
Description: Searching house(family) giving location , area(sqft), price, bed and baths				
Precondition (If any): User must be registered and logged in with valid information.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Click “Rent House” button 3. Select House type 4. Select Area(sqft). 5. Select Location 6. Select Price 7. Select Beds & Baths 8. Click “Search” button	House for: Family Area: 950-1100 sqft Location: Bashundhara R/A Price: 15000-20000/month Beds & Baths: 2 Beds & 2 Baths	User searching for family home in Bashundhara R/A.	As Expected,	Pass
Post Condition: The House type, area, price and location will be updated anytime in the database when user select it.				

Table 6: Test case for House View and Video

Project Name: Rent-A-House			Test Designed by: Sakibur Rahman	
Test Case ID: RH_6			Test Designed date: 4/2/2024	
Test Priority (Low, Medium, High): High			Test Executed by: Amatul Wahid Prottasha	
Module Name: House view and video			Test Execution date: 5/8/2024	
Test Title: Test website House view				
Description: See house picture with area(sqft) and video				
Precondition (If any): User must have registered & log into the website				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Click on Rent House “view” button 3. Select Video	Options: “Video”	User should be clicking on video button to see house recent video	As Expected,	Pass
Post Condition: The videos and house picture will be updated continuously after a certain time from better resources.				

Table 7: Test case for Payment

Project Name: Rent-A-House			Test Designed by: Sakibur Rahman	
Test Case ID: RH_7			Test Designed date: 4/2/2024	
Test Priority (Low, Medium, High): High			Test Executed by: Shohan Haque	
Module Name: Payment			Test Execution date: 5/9/2024	
Test Title: Test website Payment page.				
Description: Complete payment with valid account number.				
Precondition (If any): User must have valid mobile banking account for online payment.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website. 2. Click on “House Rent” 3. Select House 4. Click on “Booking” 5. Select “Nagad” 6. Insert account number. 7. Insert amount 8. Click on “Pay” button.	Account number: 01823456761 Amount: 15500	User should be able to pay properly.	As Expected,	Pass
Post Condition: N/A				

Table 8: Test case for Cash Payment

Project Name: Rent-A-House			Test Designed by: Sakibur Rahman	
Test Case ID: RH_8			Test Designed date: 4/2/2024	
Test Priority (Low, Medium, High): High			Test Executed by: Simit Jahin Megh	
Module Name: Cash Payment			Test Execution date: 5/9/2024	
Test Title: Test website Payment page.				
Description: Complete payment				
Precondition (If any): User must have pay on cash.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website. 2. Click on “House Rent” 3. Select House 4. Click on “Booking” 5. Select “Cash” 6. Insert Contact Number. 8. Click on “Printt” button.	Contuct number: 01823456761 Amount: 20000	User should be able to pay properly.	As Expected,	Pass
Post Condition: N/A				

Table 9: Test case for Log Out

Project Name: Rent-A-House			Test Designed by: Sakibur Rahman	
Test Case ID: RH_9			Test Designed date: 4/2/2024	
Test Priority (Low, Medium, High): Medium			Test Executed by: Amatul Wahid Prottasha	
Module Name: Log Out			Test Execution date: 5/10/2024	
Test Title: Test Webpage for Log Out				
Description: Verify user can logged out properly				
Precondition (If any): User have to logged in first with his/her valid information				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Click Log out	Name: Sakibur Rahman Email: sakibur123@gmail.com Password: Sakib@321	User should easily log out from the system	As expected,	Pass
Post Condition: User will log out from system				

8. Item Pass/Fail Criteria:

In our project, test case items pass if they confirm platform functionality without critical issues and meet predefined benchmarks. They fail if they uncover defects or miss standards. Recommendations are made post-testing, and release decisions rest with the project manager and test lead. If 98% of tests pass and critical issues are resolved, software release may proceed, pending stakeholder approval. This meticulous process ensures platform quality and user satisfaction.

9. Test Deliverables:

The Software Quality and Testing Plan defines the technical and managerial processes necessary for the syst-em's development and delivery.

- Initially, we establish an acceptance test plan that details the functional requirements to be verified and the testing method to be utilized. This plan acts as a guide for our testing tasks, making sure they are in line with project goals and stakeholder needs.
- Afterward, we develop a collection of thorough test cases that encompass different situations and features of the house rental platform. These test cases consist of detailed instructions, anticipated results, and pass/fail assessment criteria, giving us a structured method for testing.
- Next, we streamline test execution by creating test scripts with Selenium WebDriver or alternative automation tools. These scripts help to simplify our testing procedures, enabling us to efficiently and consistently run test cases on various browsers and environments.

- After the tests are completed, we create detailed reports that summarize the outcomes and advancement of our testing efforts. These reports offer stakeholders insights on our testing progress and highlight any areas needing more attention.
- Furthermore, we record any faults or problems discovered during testing in defect reports. These reports provide in-depth details on every defect, including severity, priority, reproduction steps, and status, to help our development team efficiently resolve issues.
- Additionally, we create a test summary report after testing concludes to give stakeholders a thorough understanding of our testing procedures, discoveries, and results. This report assists stakeholders in making informed decisions on the preparedness of the house rental platform for its release.
- Additionally, we offer suggestions for release based on the test outcomes and discoveries, emphasizing any unresolved concerns or potential risks that could influence the release choice. These suggestions help stakeholders decide on the right steps to take for the platform's launch.
- Finally, we hold knowledge transfer sessions to impart insights and best practices from our testing process to the project team. These meetings guarantee that stakeholders are kept in the loop and ready for action.

10. STAFFING AND TRAINING NEEDS

It is recommended that this project designate at least one dedicated inspector owing to the project's structural complexity and the stages involved in its distribution. For assessment purposes, the assigned individual should be allotted an initial period at the project's outset, followed by full-time engagement roughly six months later. In the event that an alternative tester is unavailable, the project or test manager will assume the responsibilities. To ensure a comprehensive and relevant study, the following preparatory topics should be addressed:

- The personnel selection for this project has been carefully planned, with the majority of the group assigned to specific research tasks outlined in greater detail within the responsibilities section.
- Developers and testers will require training in Java, Dart, Flutter, and MySQL to effectively contribute to the project's objectives.
- The automation tester must acquire the requisite knowledge and practical experience to proficiently utilize the designated tools.

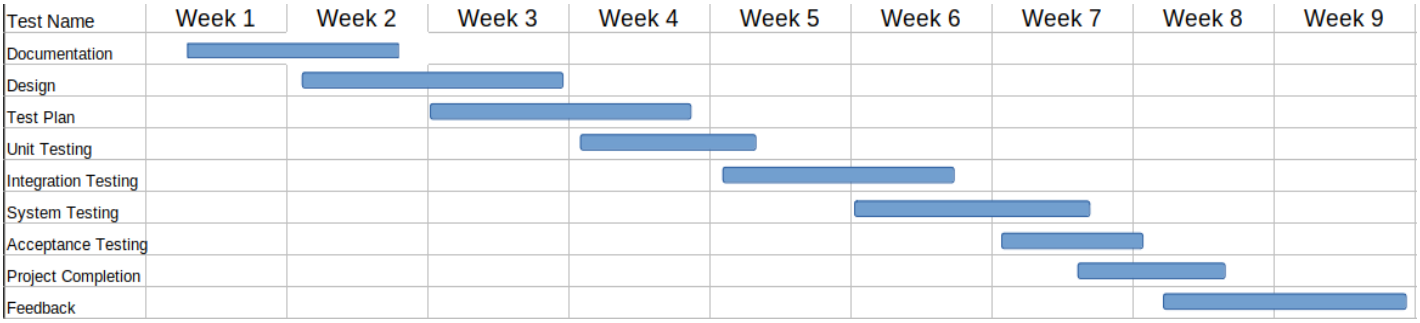
By addressing these preparation-related considerations, the project can proceed with a well-equipped and knowledgeable team, enhancing the likelihood of success in achieving its goals.

11. RESPONSIBILITIES

	TM	PM	Dev Team	Test Team	Client
Acceptance test Documentation & Execution	X	X		X	X
System/Integration test Documentation & Exec.	X		X	X	
Unit test documentation & execution	X		X	X	
System Design Reviews	X	X	X	X	X
Detail Design Reviews	X	X	X	X	
Test procedures and rules	X	X	X	X	
Screen & Report prototype reviews			X	X	X
Change Control and regression testing	X	X	X	X	X

12. TESTING SCHEDULE

The following testing activities are listed in the project plan. The project plan timetable contains a list of the exact dates and hours for each activity. A list of the people needed for each step is also included in the project schedule and plan. The project manager, in collaboration with the development and test team leaders, will organize the management, customer, test team, and development team employees required for each assignment.



13. PLANNING RISKS AND CONTINGENCIES:

Worries about the security of data:
The absence of encrypted data may jeopardize user privacy and data integrity. In order to reduce this risk, we guarantee that all sensitive data, such as user information and property details, is encrypted with strong encryption methods. Regularly backing up data is crucial to avoid losing information in the event of security breaches.
Attempts to access without authorization:
Trying to access user accounts without permission is a major worry. In order to deal with this issue, we put in place actions like monitoring unsuccessful login tries and limiting entry after multiple failures in a brief period.
Mistakes related to functionality:
Mistakes in the operation of our rental platform may result in user unhappiness and a decrease in trustworthiness. Consistent testing and quality assurance procedures are essential to quickly find and fix any functional mistakes. Furthermore, regularly backing up the system helps to preserve data accuracy and allows for rapid recovery in the event of mistakes.
Weaknesses in SQL commands:
Mistakes in SQL commands may result in the disclosure of confidential information. To reduce this risk, we perform routine security scans to find weaknesses and guarantee that sensitive data is properly secured. Maintaining current backups of important information also reduces the consequences of possible security violations.

Contingency Planning:
Plan for dealing with breaches of data security:

- We will promptly separate systems that are impacted.
- We will inform users and stakeholders without delay.
- Our team will perform a comprehensive inquiry and enforce required security protocols.
- We will examine and revise our data security protocols in order to avoid any potential breaches in the future.

Plan for potential service downtime:

5. We will quickly examine and fix the service.
6. We will actively engage with users through different communication channels.
7. If needed, we will provide different ways to access.

14. Approval:

Project Sponsor	
Development Management	
EDI Project Manager	
RS Test Manager	
RS Development Team Manager	
Reassigned Sales	
Order Entry EDI Team Manager	