

American International University-Bangladesh (AIUB)  
**Department of Computer Science  
Faculty of Science &Technology (FST)  
Spring 21\_22**

**Section: G  
Group No: 04**

**Helpline Community Services for Bachelor**

A software Engineering project submitted

By

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S/N | Student Name | Student ID | Contribution (%) | Individual Marks |
| 33. | JAKARIA KHAN RAFI | 20-43273-1 | 10% |  |
| 31. | SHAFIUL AJAM OPEE | 20-43194-1 | 28% |  |
| 26. | SYED MUHAMMAD HASNAT JAMEE | 20-42918-1 | 10% |  |
| 23. | FARHANA YEASMIN MUNMUN | 20-42710-1 | 27% |  |
| 04. | MD. RASHEDUL ISLAM | 17-33685-1 | 25% |  |

The project will be Evaluated for the following Course Outcomes

|  |  |
| --- | --- |
| Your Project will be Evaluated based on the following marking criteria | Total Marks |
|  |
| Requirements Analysis (functional, quality, and project requirements)  [5Marks] |  |
| System Design (UI/UX design) & Test case [5Marks] |  |
| Project Management Planning [5Marks] |  |
| Submission, Completeness, Spelling, Grammar and Organization [5Marks] |  |

Submission Date: 17 April, 2022

Description of Student’s Contribution in the Project work

|  |
| --- |
| Student Name: JAKARIA KHAN RAFI  Student ID: 20-43273-1  Contribution in Percentage (10%):  Contribution in the Project:   * Functional Requirements Analysis (2.1,2.2,2.3)   Rafi  Signature of the Student |
| Student Name: SHAFIUL AJAM OPEE  Student ID: 20-43194-1  Contribution in Percentage (28%):  Contribution in the Project:   * System test plans (FR\_1, FR\_2, FR\_3, FR\_4, FR\_5) * Test Quality Attributes (QA-1, QA-6, QA-7)   Opee  Signature of the Student |
| Student Name: SYED MUHAMMAD HASNAT JAMEE  Student ID: 20-42918-1  Contribution in Percentage (10%):  Contribution in the Project:   * Functional requirements (3.1,3.2,3.3)   Jamee  Signature of the Student |
| Student Name: FARHANA YEASMIN MUNMUN  Student ID: 20-42710-1  Contribution in Percentage (27%):  Contribution in the Project:   * System Design (UI/UX design)   Munmun  Signature of the Student |
| Student Name: MD. RASHEDUL ISLAM  Student ID: 17-33685-1  Contribution in Percentage (25%):  Contribution in the Project:   * Requirements Analysis (Functional Requirements :1 ,4. Non-Functional Requirements: 6,7) * Test Quality Attributes (QA-2, QA-3, QA-4, QA-5, QA-8-11)   Rashedul  Signature of the Student |

# PRODUCT AND PROJECT DESCRIPTION

## System Features

1. **Sign Up (as homeowners & bachelors)**

**Functional Requirements**

* 1. The software will allow users to create with account by filling an online form, by providing their valid name, passport/NID card, date of birth, mobile number, location, gender & email.
  2. They will also have to set a password and re-writing it for confirmation, in that form.

*Priority Level:* Medium  
*Precondition:* User must input their name, valid NID/PASSPORT number date of birth, mobile number, living area gender, email address and set a password. The account will be created if the given information is valid.

1. **Search house (for a bachelors)**

**Functional Requirements**

* 1. The software will allow users to place request for single room or full unit/flat on emergency basis, by filling an online form.
  2. If the requested information is available, then the software will show a confirmation page.
  3. If the requested information or rental house/room is not available, then the software will show an apologetic page.

*Priority Level:* High  
*Precondition:* User must input the current education information, rent required quantity, select either room or whole flat and the convenient place.

1. **Book Emergency labor (for bachelor)**

**Functional Requirements**

* 1. The software will allow user to place request for hiring labor on emergency basis, by selecting option though the website type and providing an additional contact number.
  2. Then the software will take the client to the payment page. User will have to select the payment method for pay and must select either confirm or cancel.
  3. If the requirements are valid & payment is confirmed, then the software will show a confirmation page.

*Priority Level:* High   
*Precondition:* User must input their current location and pickup time, additional contact number and choose vehicle type. User must confirm the payment by hiring labor and payment method.

1. **Administration or dashboard panel**

**Functional Requirements**

* 1. The software will allow to homeowners to place advertise their flat for the rent.
  2. Home owners need to be provided when they want to publish their advertisement
  3. user have to provide their identification according to their NID card.

*Priority Level:* High  
*Precondition:* User must input their valid NID card number, flat information, land papers, contact number etc.

1. **Deliver users goods (as labor)**

**Non-functional Requirements**

* 1. The software will allow users necessary goods to move one place to another place.
  2. User/bachelors can hire labor from this apps simply, before hiring user must pay to the Apps after completing payment labor should be able to deliver those products.

*Priority Level:* Medium  
*Precondition:* User must input their occupation, transport type, preferred picked up time and delver time, and location name.

1. **Performance issue**

**Non-functional Requirements**

* 1. The software will allow to store all home owner’s flat information, so this software need have a big database management system.
  2. If database information is too large then it will be some technical problem like Image can’t load properly and sometimes user will not be able to browse because of traffic

*Priority Level:* Medium  
*Precondition:* homeowners must input their name, attach their flat information with some photos and renters must attached small size image and require information.

1. **Security**

**Functional Requirements**

* 1. This software allows to give renters some information like when user hiring labor after confining payment, they can able to see how much time they have to wait to move their goods
  2. when renter/homeowners register this website is their given information is valid or not admin can verify their information
  3. This software Have a securely payment method SSL commerce method, there is no more third party when renters pay their renter flat, they can safely pay through this software

*Priority Level:* High  
*Precondition:* User must input their occupation, amount of money and payment method.

## System Quality Attributes

**QA 1–Availability:**The system shall be expected **98%** available,which will give service **24/7**. This system will provide service in any emergency situation so that client can use this system any time.

*Priority Level:* High  
*Precondition:* Users are required to login into the system  
*Cross-reference:* QA-6, QA-7

**QA 2–Efficiency & Performance:** For running the system smoothly **at least 20 percent** of the processor capacity and RAM available to the application shall be unused at the planned peak load conditions. In this system every Web page shall download in **maximum 10 seconds** or less over a **30 Bps** in any modem connection.

*Priority Level:* High

*Precondition:* N/A

*Cross-reference:* QA-3, QA-5, QA-6, QA-8, QA-9, QA-11

**QA 3–Flexibility:**This system shall be user friendly. If there any need to add something there or update something a maintenance programmer can work on this product shall be able to make a new copy output available to the product, including code modifications and testing, with no more than **two or three hours** of labor.

*Priority Level:* High  
*Precondition:* System should be identified an error.  
*Cross-reference:* QA-2, QA-4, QA-6, QA-9, QA-10, QA-11

**QA 4–Integrity:**Only **admin and management team** have access privileges shall be able to view user’s information and previous history.

*Priority Level:* High  
*Precondition:* Users are required to login with valid information  
*Cross-reference:* QA-2, QA-5, QA-8, QA-11

**QA 5–Interoperability:**The system shall be able to import any data from the blood bank and hospital. Besides from hospital list available ambulance list’s data also imported by this system.

*Priority Level:* High  
*Precondition:* Users are required to login into the system with a valid information  
*Cross-reference:* QA-2, QA-3, QA-4, QA-10

**QA 6–Reliability:**In this system **not more than 1200 users** at a time.Because system can be failure if a big amount of user uses it at a time.

*Priority Level:* High  
*Precondition:* N/A  
*Cross-reference:* QA-1, QA-2, QA-3, QA-9, QA-7, QA-8, QA-11

**QA 7–Robustness:** System shall be able to recover all changes made in the form being edited up within **one to three minutes** prior to the failure. Therefore, when same user starts the program, they would get the recover form. System shall get notified if there any error occurrence. Then it shall be able to solve the error within **five minutes**.

*Priority Level:* High

*Precondition:* Users are required to login into the system

*Cross-Reference:* QA-1, QA-6

**QA 8–Usability:** The valid user shall be able to request for necessary services within **30 to 90 seconds.** It shall not be extended to **two minutes.**

*Priority Level:* High

*Precondition:* Users are required to login with valid information

*Cross-Reference:* QA-2, QA-7, QA-11

**QA 9–Maintainability:** A maintenance programmer shall be able to modify existing form within **two hours or less**. To fix any system problem maintenance team shall be able to solve the problem within **4 labor hours or less.**

*Priority Level:* High

*Precondition:* System should be identified an error.

*Cross-Reference:* QA-1, QA-2, QA-3, QA-6, QA-11

**QA 10–Portability:** The system shall be run on the android platform; through smart-phone or tablet. The user shall be able to use it from anywhere in Bangladesh.

*Priority Level:* Medium

*Precondition:* N/A

*Cross-Reference:* QA-2, QA-3, QA-5, QA-8, QA-9, QA-11

**QA 11–The stability:** Software shall be able to identify the possible breakdown of a system. The maximum module complexity shall **not be above 15**.

*Priority Level:* High

*Precondition:* N/A

*Cross-Reference:* QA-1, QA-2, QA-3,QA-6, QA-8, QA-9

## Project Requirements

To make our project successful by reaching our facilities to the people’s doorstep within less time, we need to develop our project according to project requirements. If we make any mistake at the time of making the requirement documentation, then we’ll continue our project build up with this unknown error until we find it. That’s why we need to prepare the documentation carefully.

**Time:** 6 months

**Budget:** within 20lake

**Human Resources**:

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| --- | --- | --- |
| For server | For Works | For helping Center |
| * Admin – 5 | * Employee – 20 |  |
| * Management Team – 2 to 5 * Software developers –5 | * labor– minimum 10 * with 3-4 helpers |
| * Outsources – if needed |  |

**Property and Communicative Resources:**

* 1400 sq ft 6 floor building (by rent) as our physical office
* Well understanding with these helpline community service for bachelors into this building
* Preservation of 2 mini-pickup, 5 van.

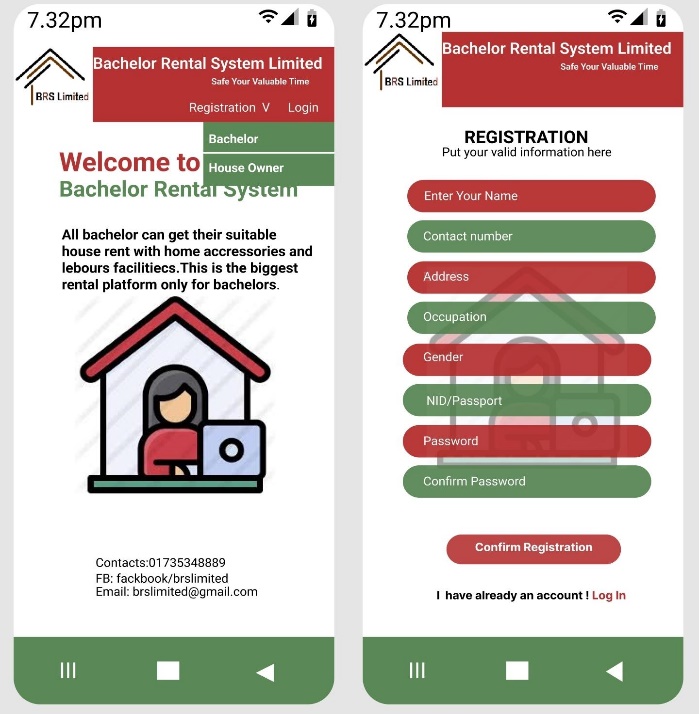
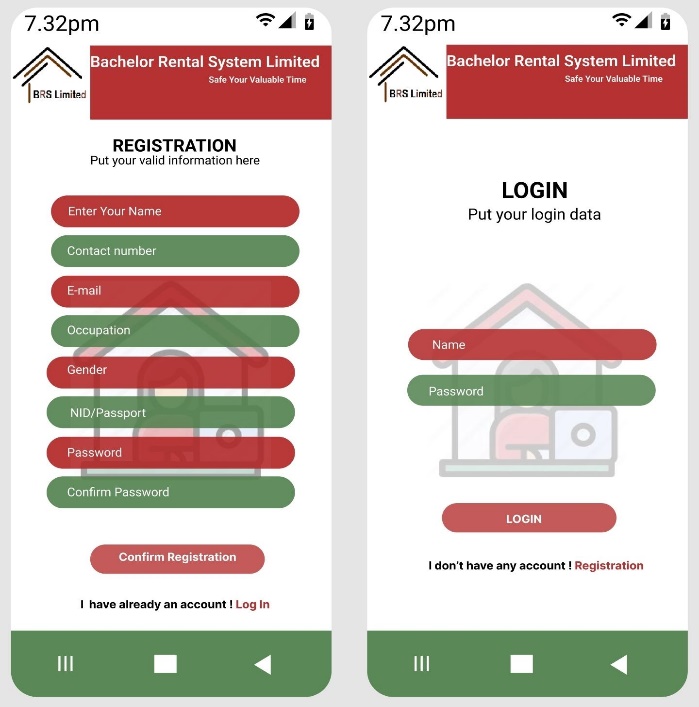
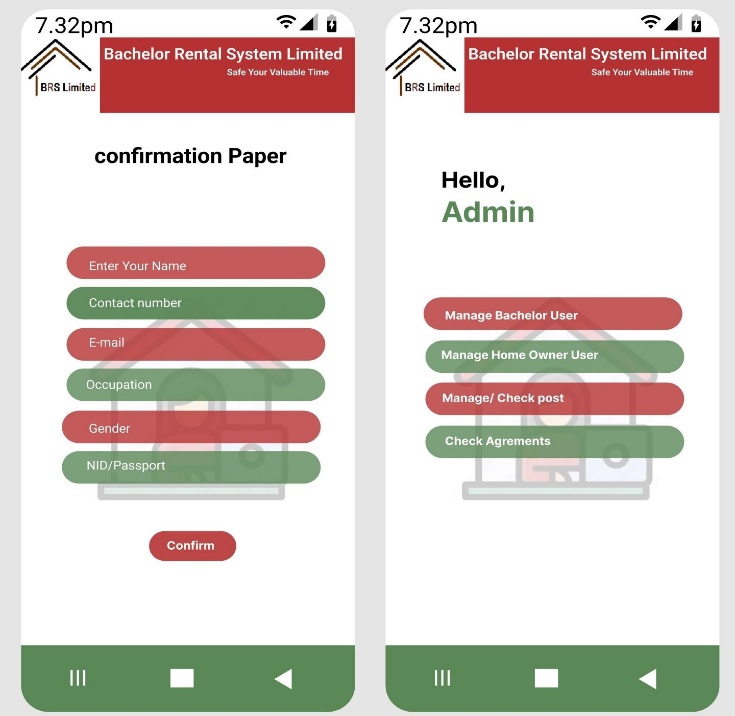
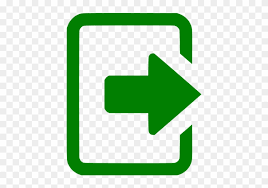
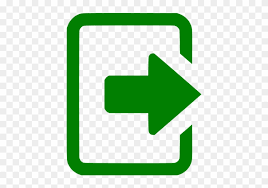
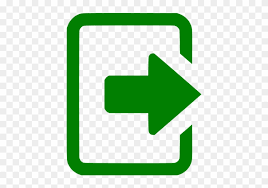
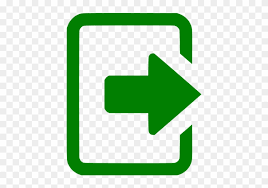
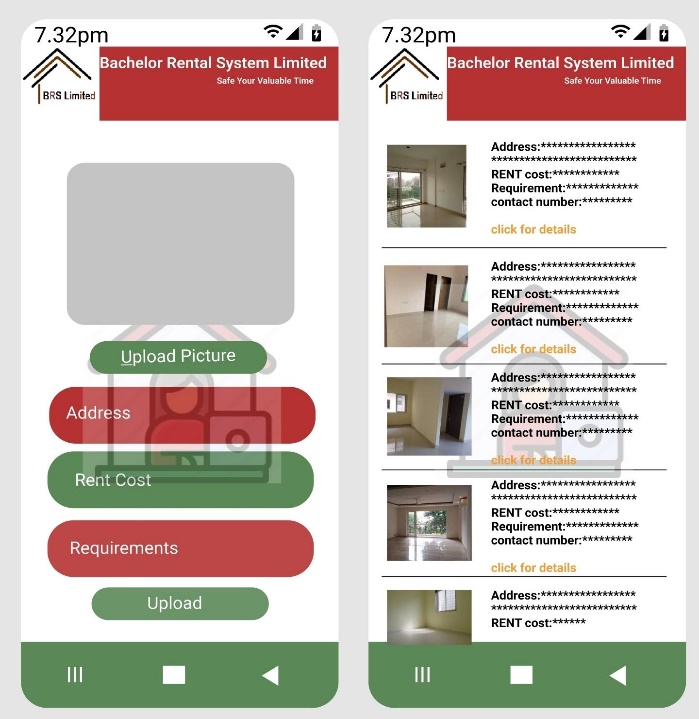
**Internet Resources:** 10/25 bps Broadband connection.

**Device Resources:** Smart phone.

**Software Resources: React js font-end backed ASP.NET**

**User Interface Design:** figma Desktop Application

# SYSTEM DESIGN SPECIFICATION

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# SYSTEM TEST PLAN

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| --- | --- | --- | --- | --- | --- |
| Project Name: Helpline Community Services for Bachelors | | Test Designed by: Shafiul Ajam Opee | | | |
| Test Case ID: **FR\_1** | | Test Designed date: 15-04-21 | | | |
| Test Priority: Medium | | Test Executed by: | | | |
| Module Name: Registration | | Test Execution date: | | | |
| Test Title: Verify registration by account creating | | | | | |
| Description: Test android Registration/sign up page | | | | | |
| Precondition: User (Bachelor/Houseowner) must input their name, Contract number, Address, Email, Occupation, gender, NID/Passport, set a password | | | | | |
| Test Steps | Test Data | | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. Go to the application 2. Select Registration for creating an account 3. Enter name 4. Enter Contract Number 5. Enter Address/Email 6. Occupation 7. Select Gender 8. Enter NID/Passport document 9. Enter password 10. Confirm Password 11. Confirm Registration | Name: Mr. Kamal  Contract Number: +8801\*\*\*\*\*\*\*\*\*  Address: Gulshan, Dhaka  Email: [kamal243@gmail.com](mailto:kamal243@gmail.com)  Gender: Male  NID Num: \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  Password: 5\*\*\*\*\*\*\*  Confirm Password: \*\*\*\*\*\*\*\* | | User must have to give their valid information | As expected, | Pass |
| Post Condition: User is validated with database and successfully informed about confirmation. | | | | | |

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| Project Name: Helpline Community Services for Bachelors | | Test Designed by: Shafiul Ajam Opee | | | |
| Test Case ID: **FR\_2** | | Test Designed date: 15-04-21 | | | |
| Test Priority: Medium | | Test Executed by: | | | |
| Module Name: Login to start operation | | Test Execution date: | | | |
| Test Title: Verify valid login data | | | | | |
| Description: Test android page | | | | | |
| Precondition: User (Bachelors/House Owner/Admin) must have to give their valid information according to their registration info | | | | | |
| Test Steps | Test Data | | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. Go to the Application 2. Enter Name 3. Enter Password 4. Click Login | Name: Mr. Kamal  Password: 5\*\*\*\*\*\*\* | | User’s account should be created | As expected, | Pass |
| Post Condition: User is validated with database and successfully informed about confirmation. | | | | | |

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| Project Name: Helpline Community Services for Bachelors | | Test Designed by: Shafiul Ajam Opee | | | |
| Test Case ID: **FR\_3** | | Test Designed date: 16-04-21 | | | |
| Test Priority: Medium | | Test Executed by: | | | |
| Module Name: Rent requirements | | Test Execution date: | | | |
| Test Title: Verify rent information for bachelors | | | | | |
| Description: Test android page | | | | | |
| Precondition: User must have to login as Houseowner | | | | | |
| Test Steps | Test Data | | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. Click upload picture 2. Enter Address 3. Enter Rent Cost 4. Enter Requirements 5. Click Upload | Address: Bashundhara Residential Area, Dhaka  Rent cost: 8000 taka  Requirements: Advanced Payment | | User’s account should be created |  |  |
| Post Condition: User is validated with database and successfully informed about confirmation. | | | | | |

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| --- | --- | --- | --- | --- | --- |
| Project Name: Helpline Community Services for Bachelors | | Test Designed by: Shafiul Ajam Opee | | | |
| Test Case ID: **FR\_4** | | Test Designed date: 21-11-21 | | | |
| Test Priority: Medium | | Test Executed by: | | | |
| Module Name: Search for rent | | Test Execution date: | | | |
| Test Title: Verify rent information for bachelors | | | | | |
| Description: Test android page | | | | | |
| Precondition: User must have to login as bachelor | | | | | |
| Test Steps | Test Data | | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. Click For Details 2. Go to confirmation 3. Enter name 4. Enter Contract number 5. Enter email 6. Enter occupation 7. Enter gender 8. Enter NID/Passport documents 9. Click confirm | Name: Kabir Khan  Contract Number: +8801\*\*\*\*\*\*\*\*\*  Email: [kabirkhan07@gmail.com](mailto:kabirkhan07@gmail.com)  Occupation: Student  Gender: Male  NID Num:16\*\*\*\*\*\*\*\*\*\*\* | | User’s account should be created | As expected, | Pass |
| Post Condition: User is validated with database and successfully informed about confirmation. | | | | | |

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| --- | --- | --- | --- | --- | --- |
| Project Name: Helpline Community Services for Bachelors | | Test Designed by: Shafiul Ajam Opee | | | |
| Test Case ID: **FR\_5** | | Test Designed date: 15-04-21 | | | |
| Test Priority: Medium | | Test Executed by: | | | |
| Module Name: Management panel /Admin panel | | Test Execution date: | | | |
| Test Title: Verify All management panel by admin | | | | | |
| Description: Test android page | | | | | |
| Precondition: Admin must input their name and password to login than check their profile and manage user (Bachelor and House owner) ,manage post and check agreements | | | | | |
| Test Steps | Test Data | | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. Go to the application 2. Select Login to access 3. Enter name 4. Enter password 5. Click manage Bachelor 6. Click check details 7. Click manage House owner 8. Click check details 9. Click manage post and check agreement | Name: MD. Mazid  Password: \*\*\*\*\*\*\*\*\*\*\*\*  Check pending Bachelor  Check pending agreement and make agreement  Check confirmation by Bachelor  Check post and delete post  Manage agreement and users | | User must have to give their valid information | As expected, | Pass |
| Post Condition: User is validated with database and successfully informed about confirmation. | | | | | |