**BIT302 Software Engineering**

**Assignment 2**

**“Web-based Covid Track Information System to Keep Track of Covid-19 Test”**

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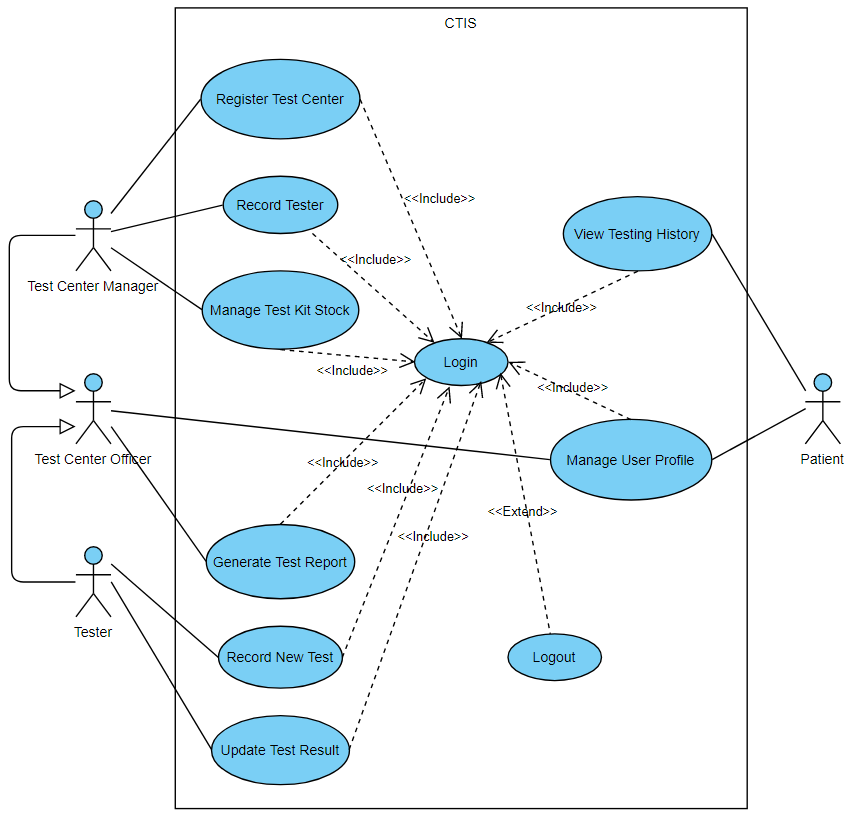
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# **Introduction**

CTIS or Covid Testing Information System is a product we developed in this project, the product will be in the form of website, this website will help user to keep track of data they needed based on the user position, such as test result data, user data, test kit data and test center data. This system will help user to get information regarding covid easier.

In this report will be included the design documentation of the system, such as: use case diagram, class diagram, ERD, Sitemap, wireframe and data dictionary. This design documentation provides all the necessary information to provide description of the details for the software and system built as well as the high-level explanation of how this system will function, components and functions that are being developed.

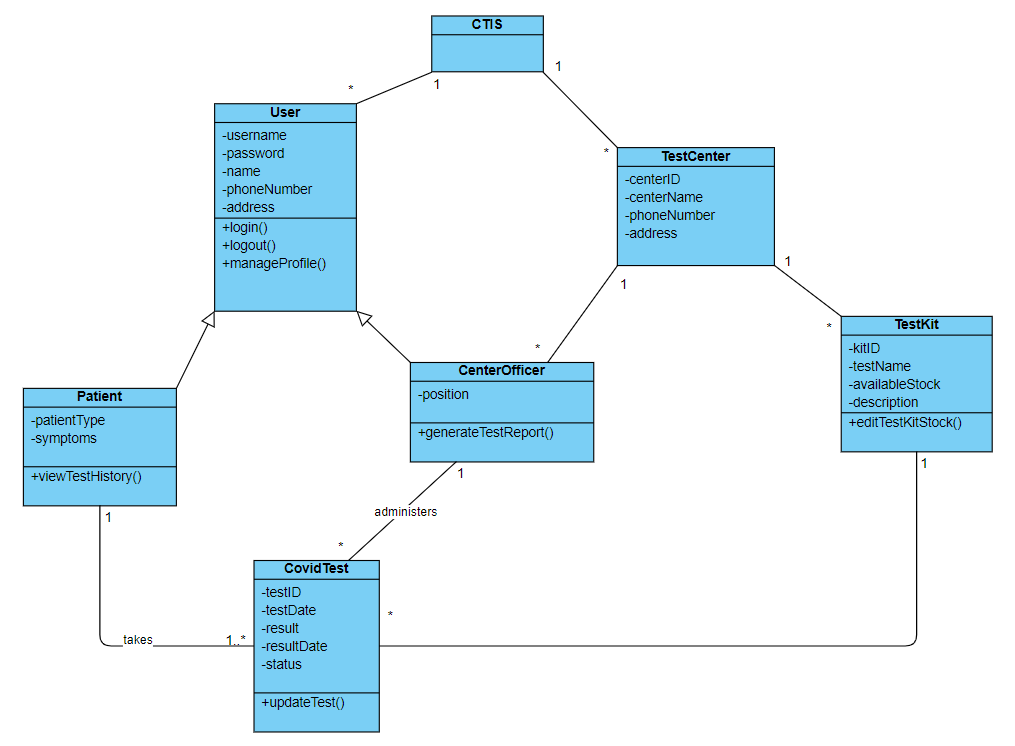
## Usecase Diagram

****

|  |  |
| --- | --- |
| **Use Case** | **Name** |
| Login | I Gede Made Armani Bagus Saputra |
| Logout | Ni Putu Dwi Candra Pertiwi |
| Manage User Profile | Ni Putu Dwi Candra Pertiwi |
| Register Test Center | I Gede Made Armani Bagus Saputra |
| Record Tester | I Gede Made Armani Bagus Saputra |
| Manage Test Kit | I Gede Made Armani Bagus Saputra |
| Record New Test | I Gede Made Armani Bagus Saputra |
| Update Test Result | Ni Putu Dwi Candra Pertiwi |
| View Test History | Ni Putu Dwi Candra Pertiwi |
| Generate Test Report | Ni Putu Dwi Candra Pertiwi |

# **Design Specification**

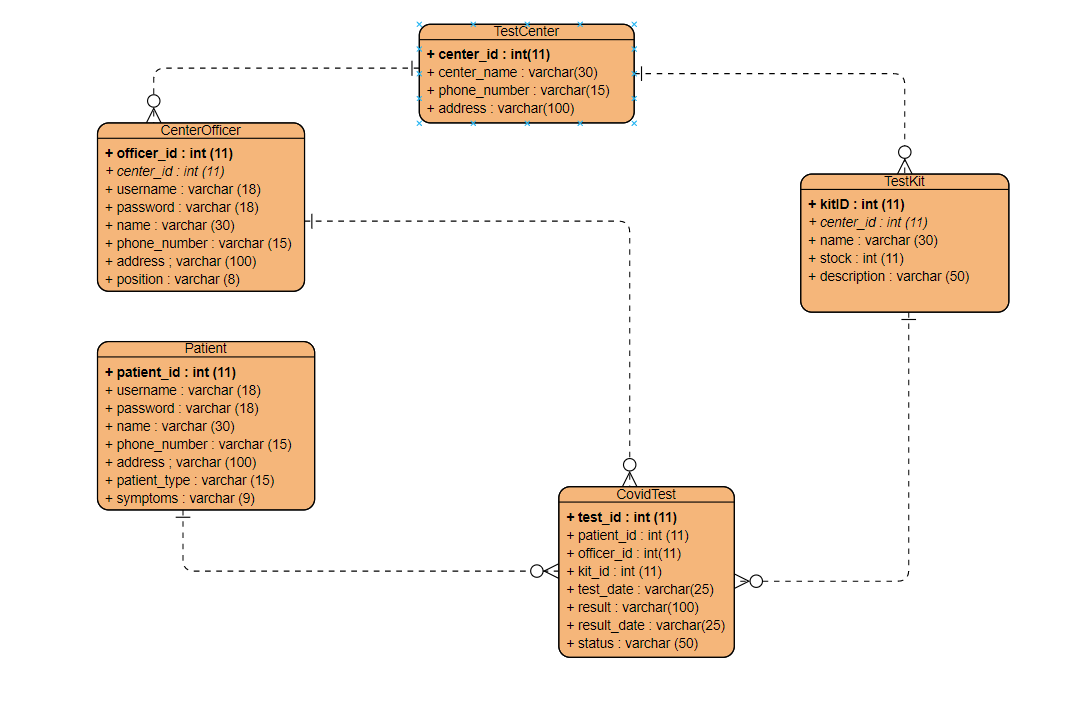
## **Class Diagram**



Note:

1. Added new attribute (description) for TestKit and (email) for User.

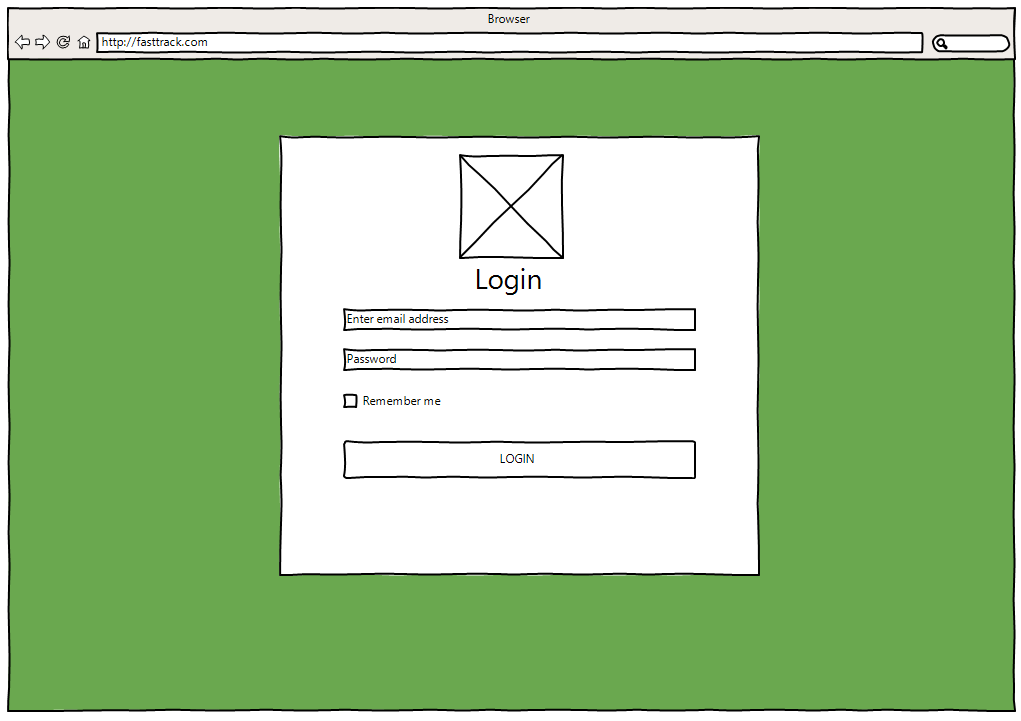
## **ERD (Conceptual View of Database)**

****

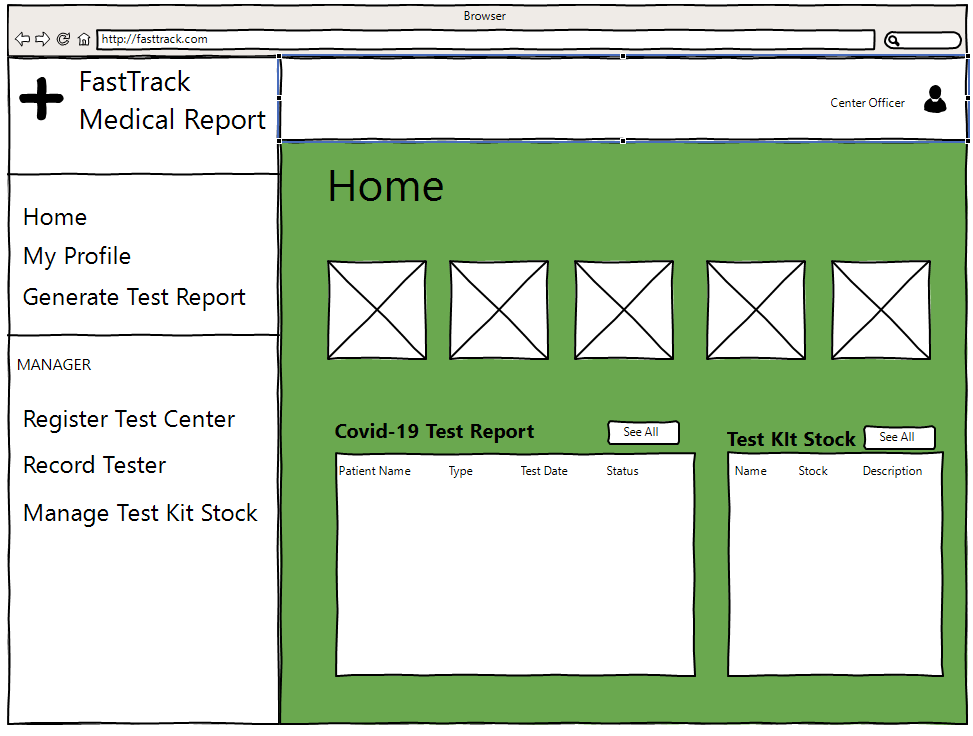
## **Sitemap**

## **Generic User Experience/Wireframe**

### **Login**



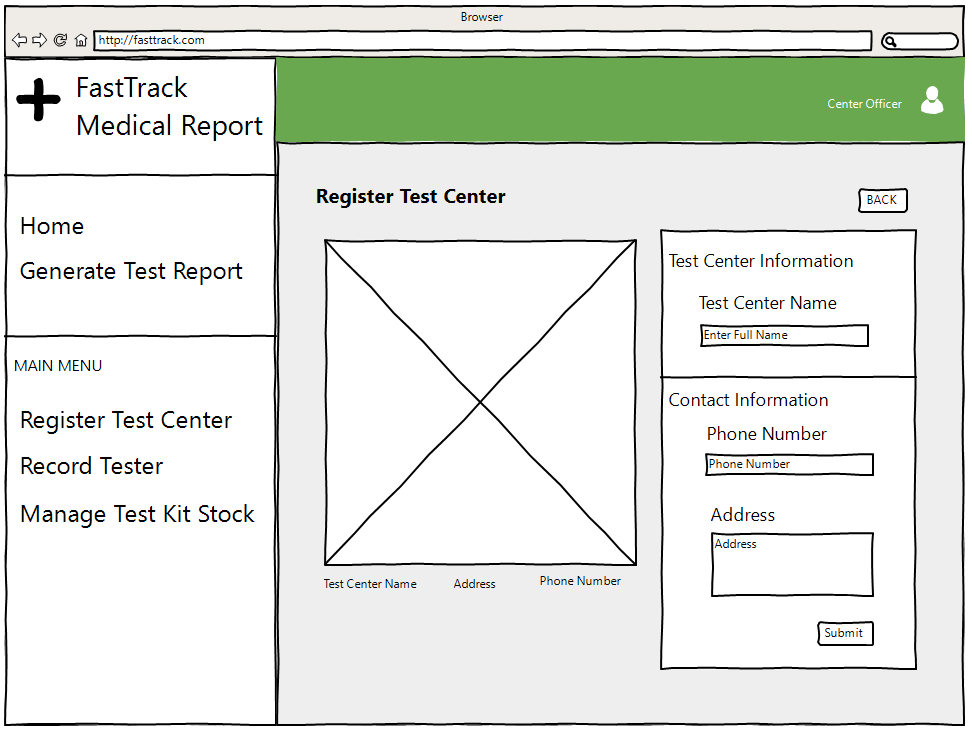
### **Home Manager**



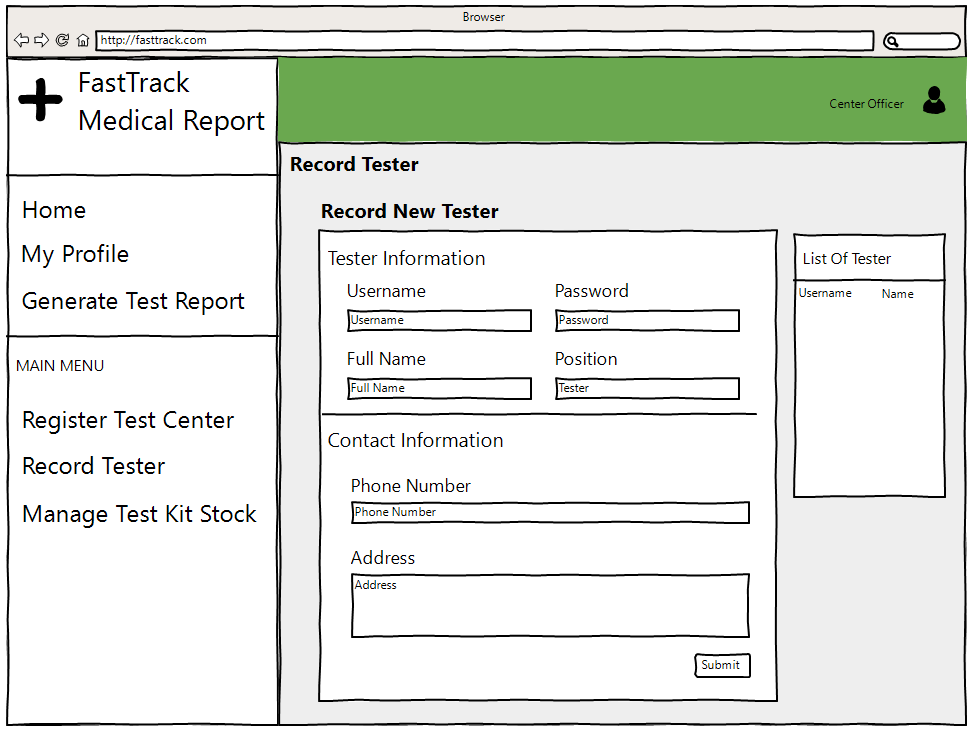
### **Manage Profile for Center Manager, Tester and Patient**

### **Generate Report for Center Manager and Tester**

### **Register Test Center**

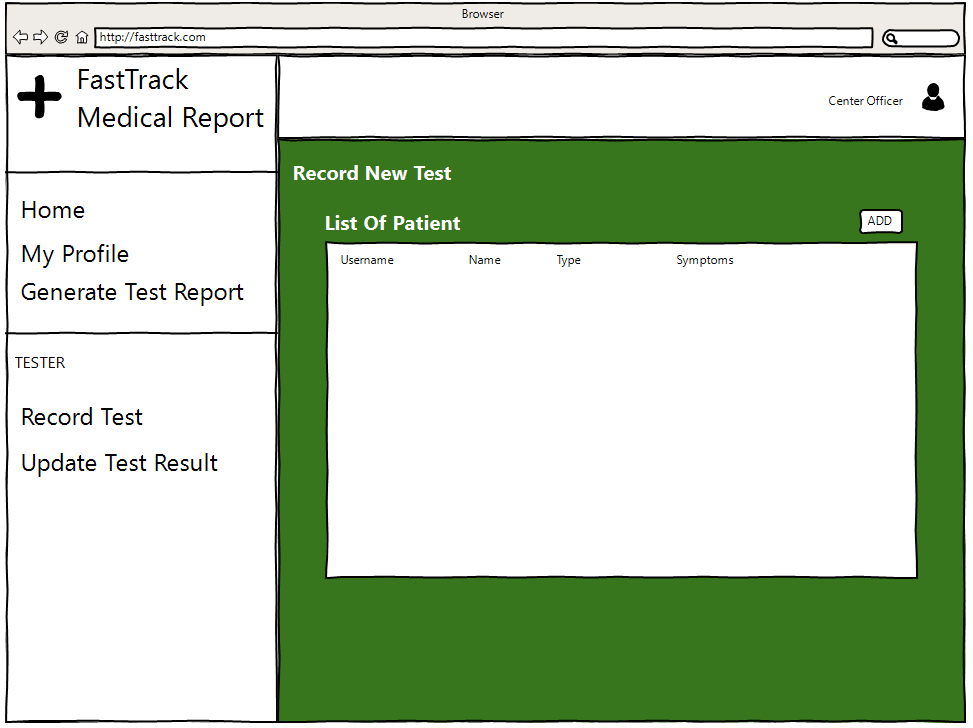
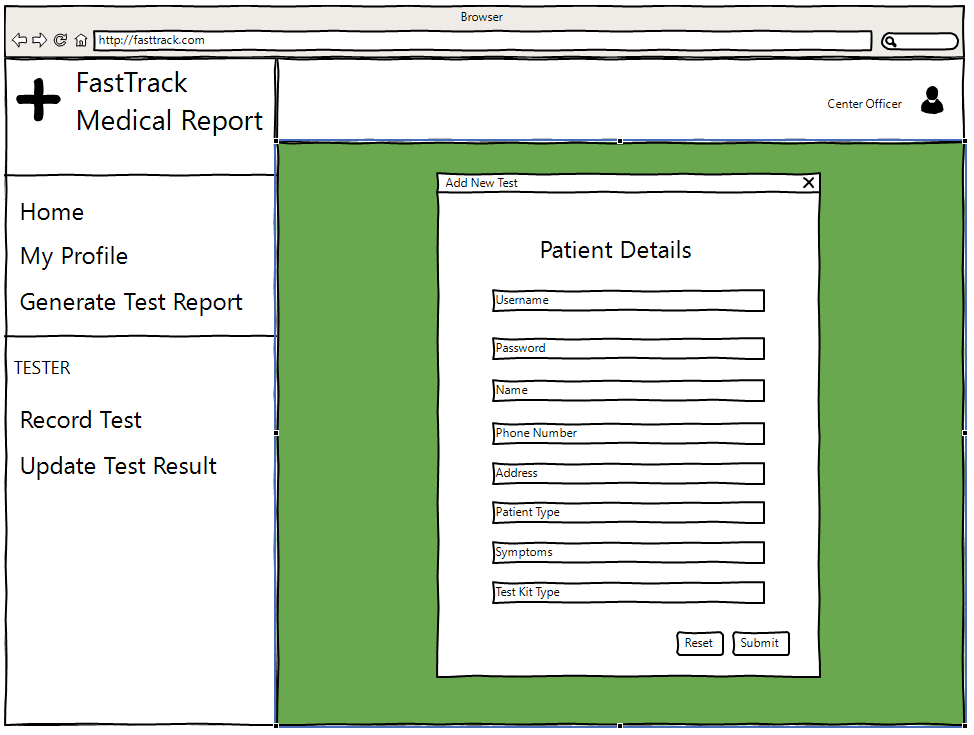


### **Record Tester**



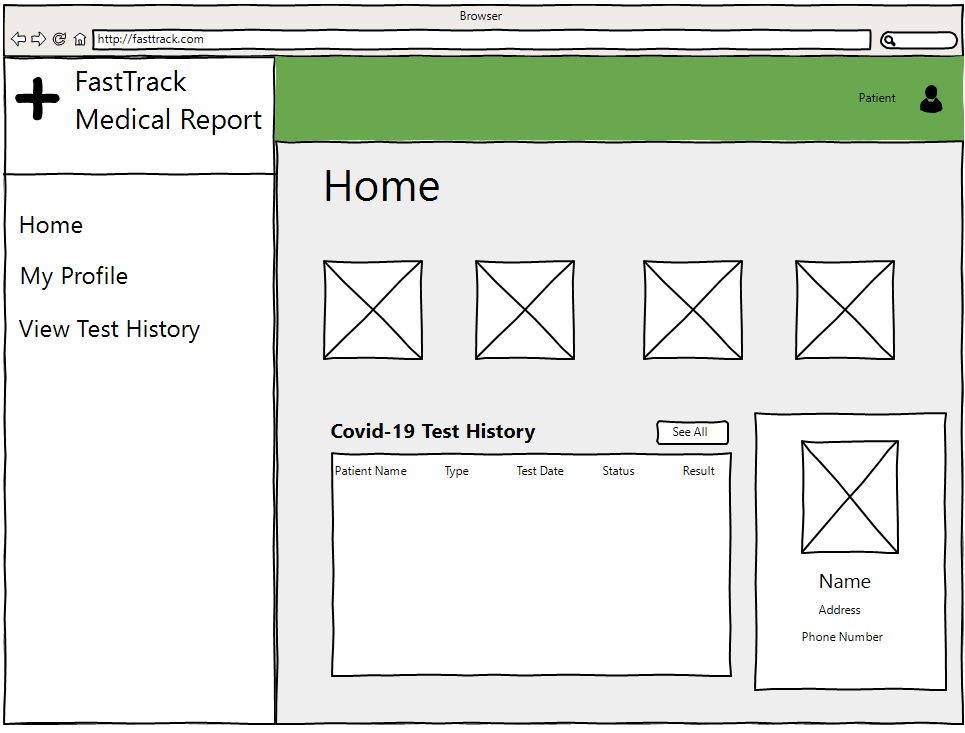
### **Manage Test Kit**

### **Record Test**

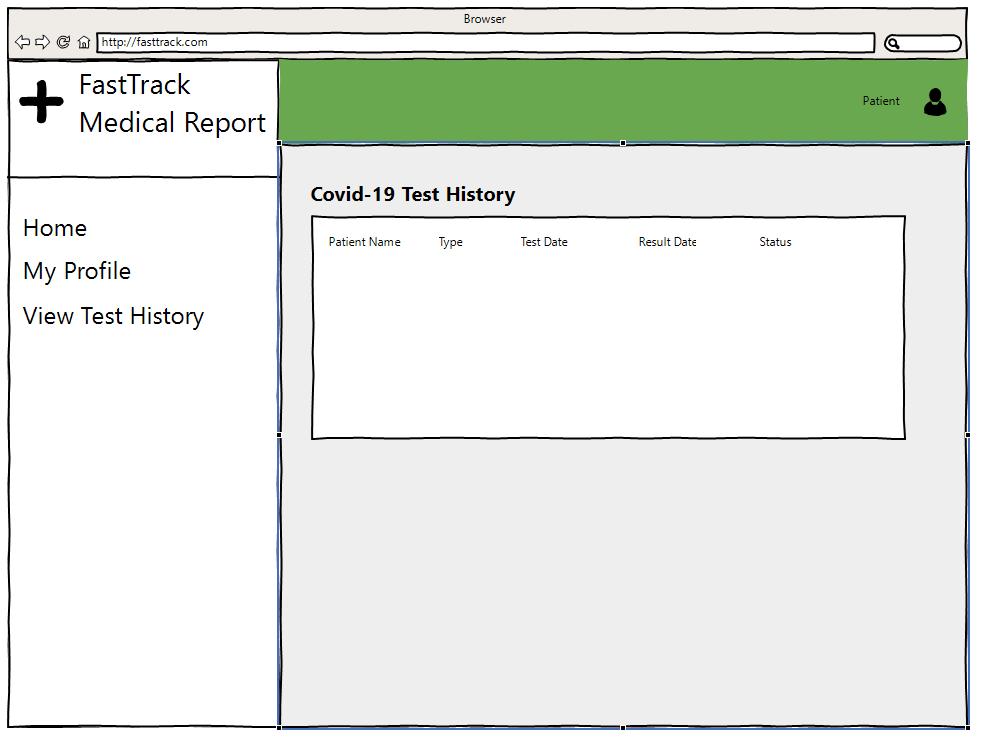


### **Update Test Result**

### **Patient Home**

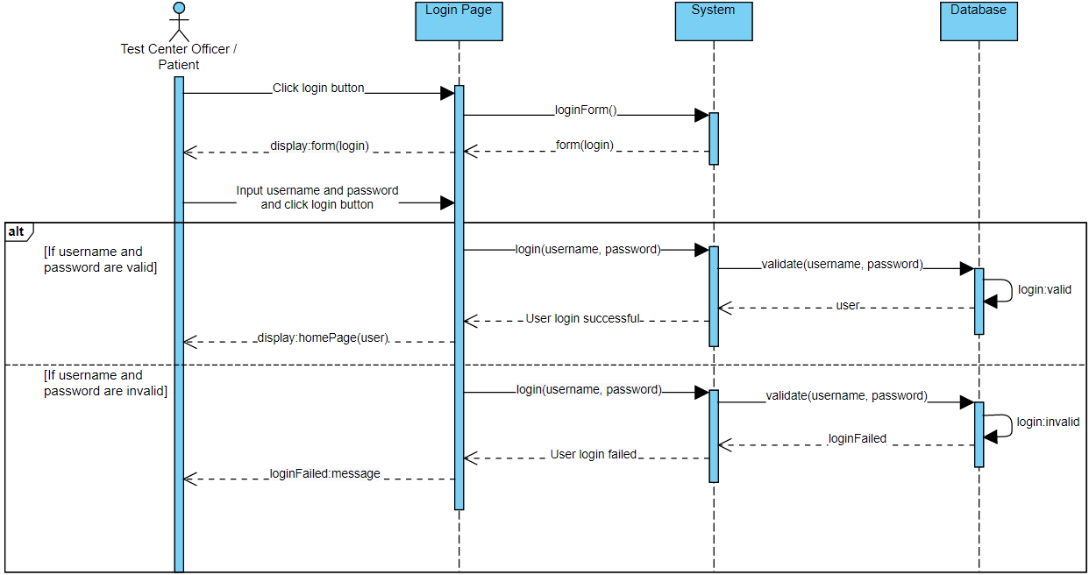


### **View Test Report**



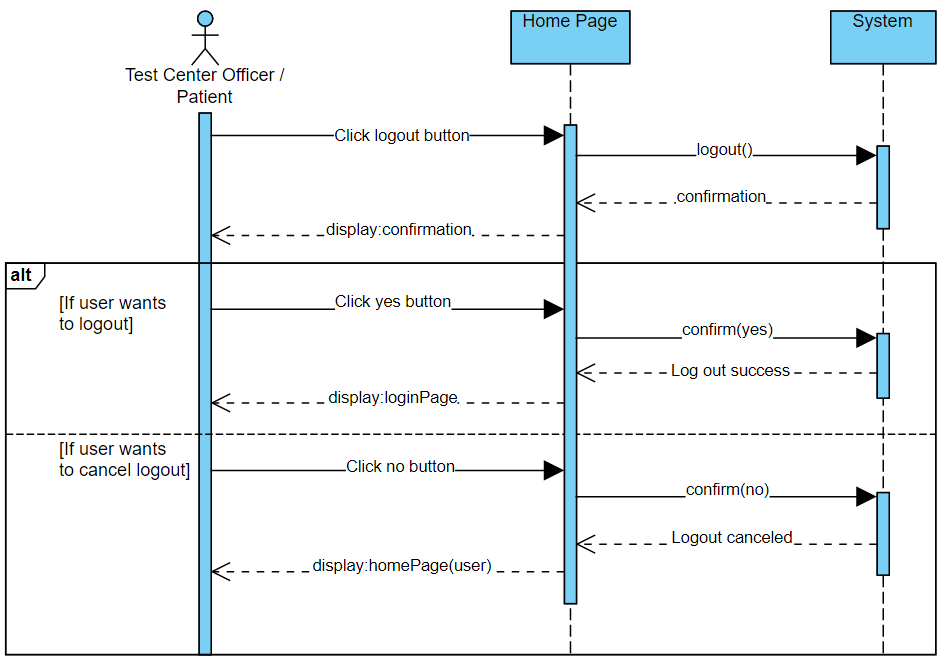
## **System Sequence Diagram and Contract**

1. **Login**



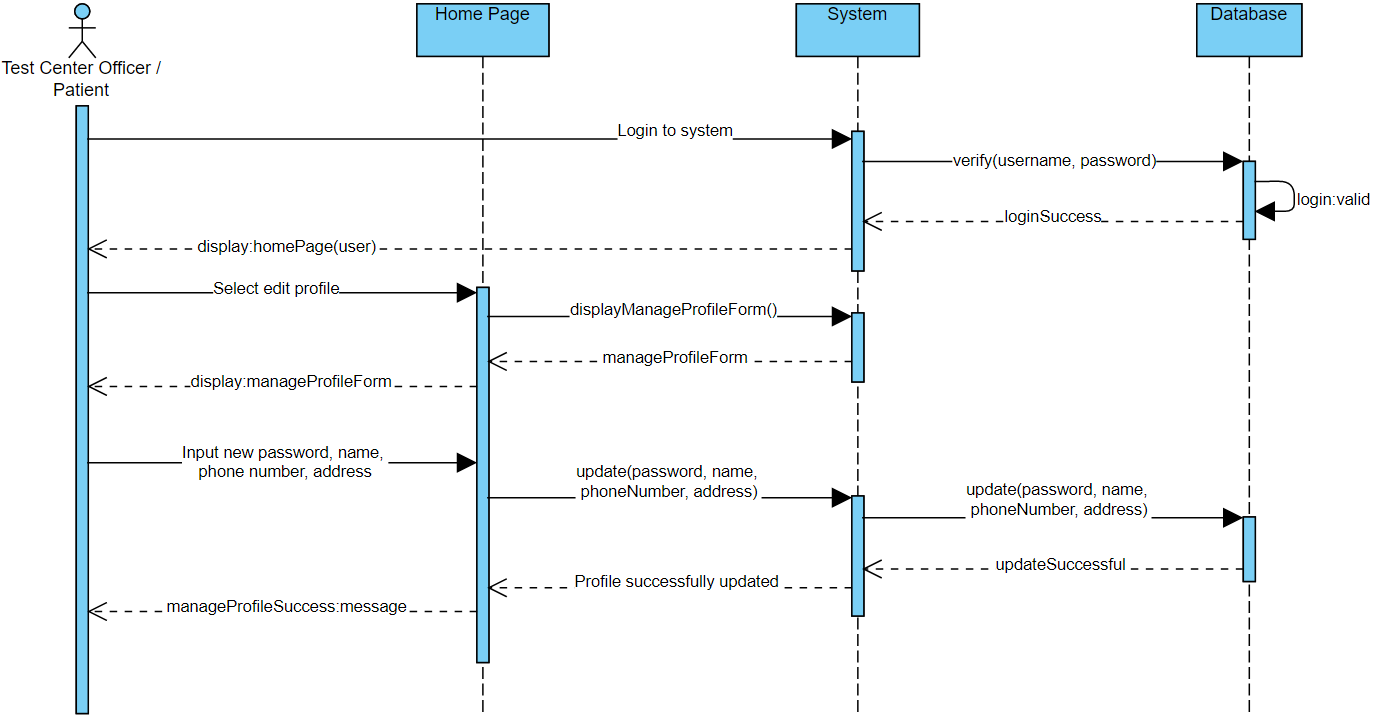
|  |  |
| --- | --- |
| **Cross Reference** | **Login** |
| **Operation** | Login with username and password |
| **Responsible** | To allow the test center officer or patient to access the CTIS |
| **Pre-conditions** | Username and password should match |
| **Post-conditions** | **If** the test center officer or patient enter the matched username and password  **Then**, system will display the home page  **Else**, system will indicate error and require to re-enter username and password |

1. **Logout**



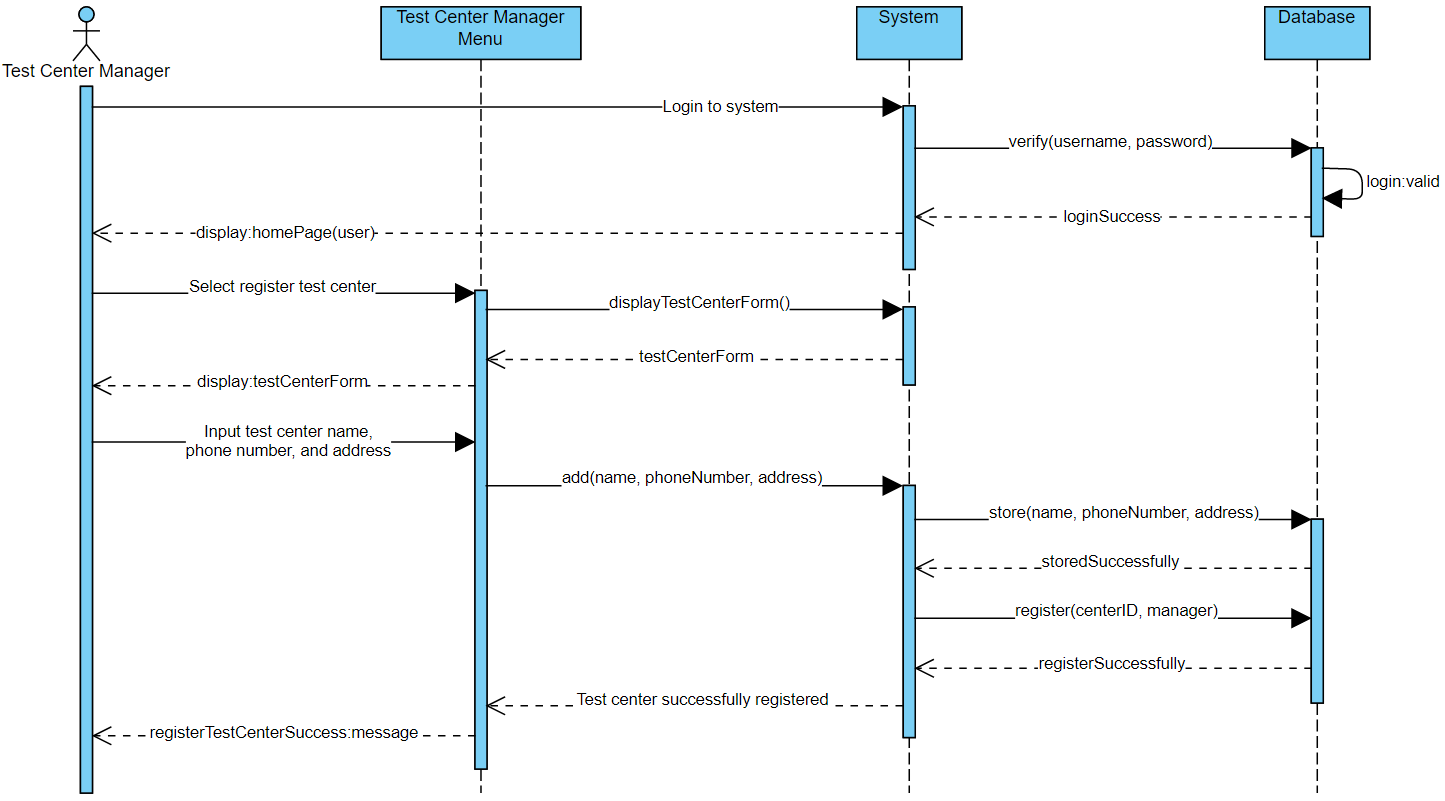
|  |  |
| --- | --- |
| **Cross Reference** | **Logout** |
| **Operation** | Test center officer or patient logout from the CTIS |
| **Responsible** | To allow the test center officer or patient to logout of the CTIS |
| **Pre-conditions** | The test center officer or patient has to finish using the features they used before |
| **Post-conditions** | **If** the test center officer or patient log out of the CTIS and click yes in the confirmation message  **Then**, the test center officer or patient account will be logging out of the CTIS and display the login page  **Else**, logout canceled by the test center officer or patient |

1. **Manage User Profile**



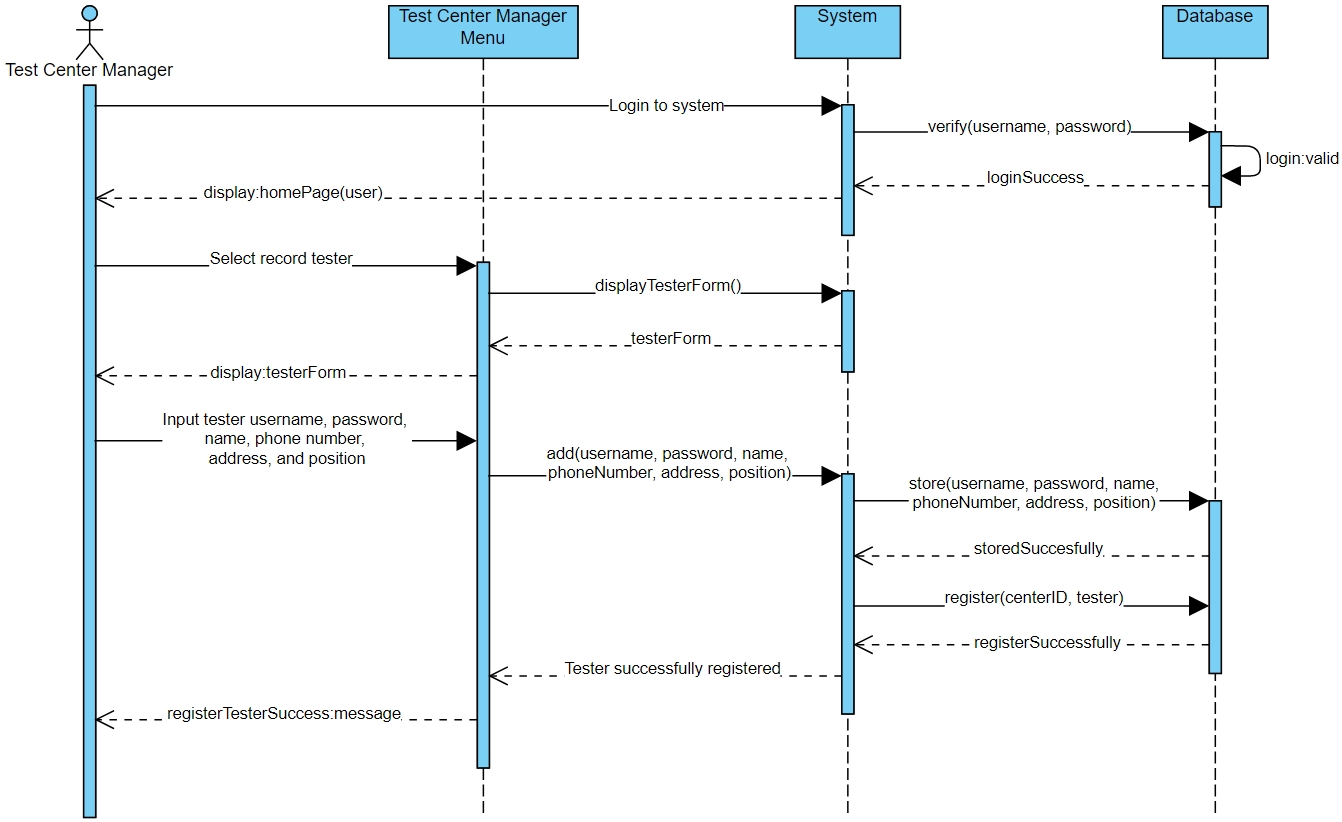
|  |  |
| --- | --- |
| **Cross Reference** | **Manage User Profile** |
| **Operation** | Login with username and password |
| **Responsible** | To get access to manage the test center officer or patient profile |
| **Pre-conditions** | Username and password should match |
| **Post-conditions** | The test center officer or patient enter the matched username and password. Then, system will display the home page. |
| **Cross Reference** | **Manage User Profile** |
| **Operation** | Manage test center officer or patient profile |
| **Responsible** | To allow the test center officer or patient to manage their profile |
| **Pre-conditions** | Test center officer or patient account should be registered |
| **Post-conditions** | * The test center officer or patient profile updated * Display successful notification |

1. **Register Test Center**



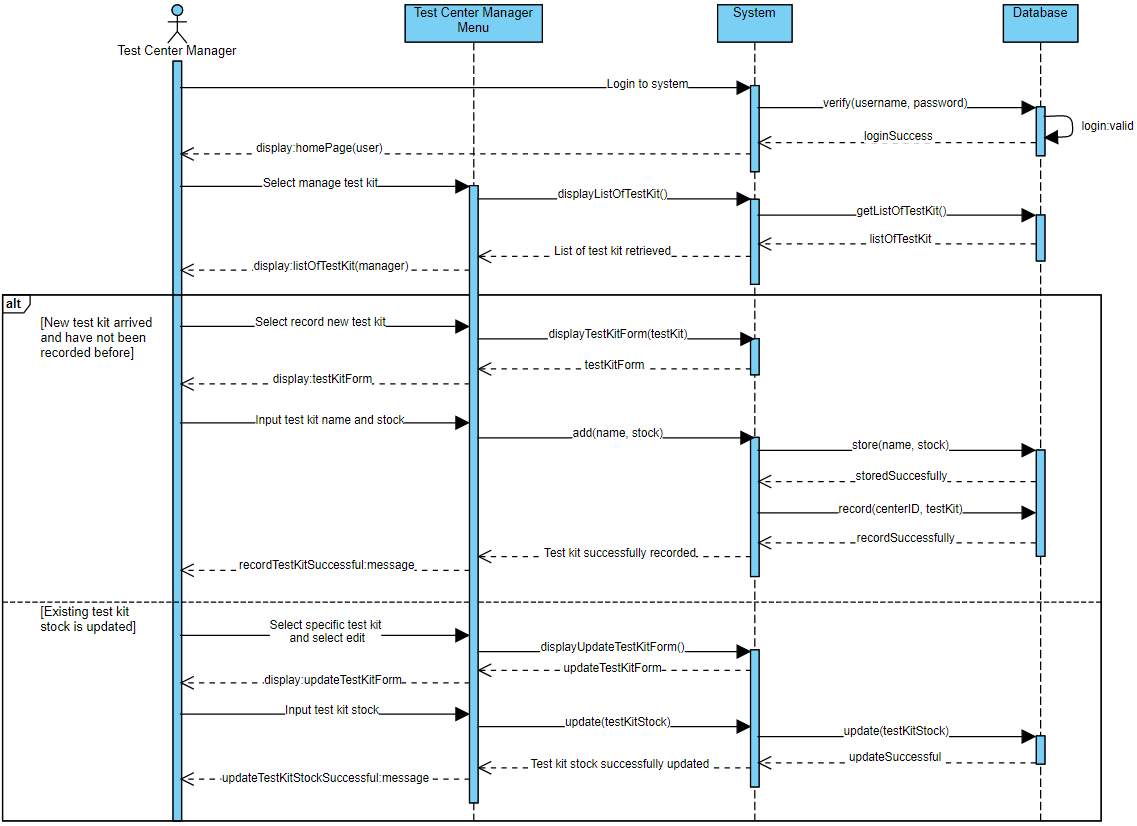
|  |  |
| --- | --- |
| **Cross Reference** | **Register Test Center** |
| **Operation** | Login with username and password |
| **Responsible** | To get access for the test center manager to register test center |
| **Pre-conditions** | Username and password should match |
| **Post-conditions** | The test center manager enters the matched username and password. Then, system will display the home page. |
| **Cross Reference** | **Register Test Centre** |
| **Operation** | Test center manager register test center |
| **Responsible** | To allow the test center manager to register the test center |
| **Pre-conditions** | * Test center must be approved * Test center manager’s account must be set up as center officer * Test center data (name, phone number, and address) must be available |
| **Post-conditions** | * Test center is registered * The centerID is automatically generated * Display successful notification |

1. **Record Tester**



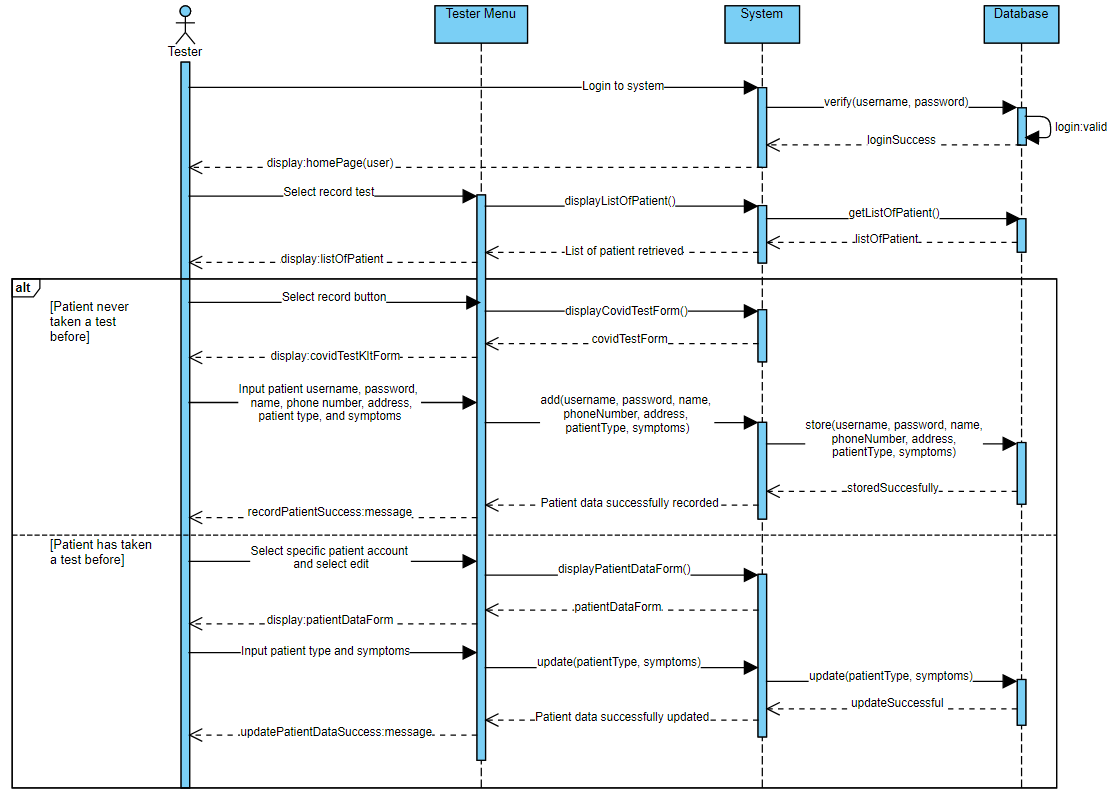
|  |  |
| --- | --- |
| **Cross Reference** | **Record Tester** |
| **Operation** | Login with username and password |
| **Responsible** | To get access for the test center manager to record new tester |
| **Pre-conditions** | Username and password should match |
| **Post-conditions** | The test center manager enters the matched username and password. Then, system will display the home page. |
| **Cross Reference** | **Record Tester** |
| **Operation** | Test center manager record new tester |
| **Responsible** | To allow the test center manager to record new tester |
| **Pre-conditions** | Tester data (username, password, name, phone number, address, and position) must be available |
| **Post-conditions** | * New tester will be recorded and registered to the test center * Display successful notification |

1. **Manage Test Kit**



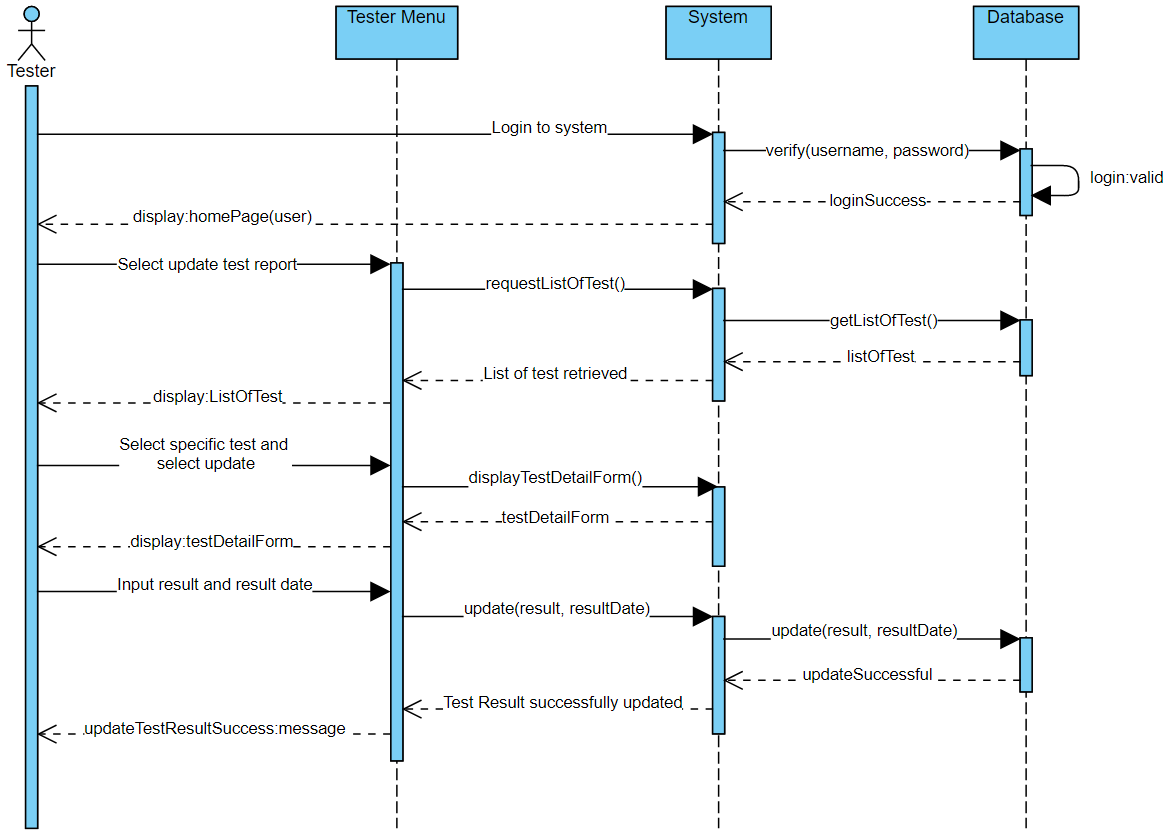
|  |  |
| --- | --- |
| **Cross Reference** | **Manage Test Kit Stock** |
| **Operation** | Login with username and password |
| **Responsible** | To get access for the test center manager to record test kit |
| **Pre-conditions** | Username and password should match |
| **Post-conditions** | The test center enters the matched username and password. Then, system will display the home page. |
| **Cross Reference** | **Manage Test Kit Stock** |
| **Operation** | Test Centre Manager manage test kit stock |
| **Responsible** | To allow the test center manager to manage the stock of test kit in the test center |
| **Pre-conditions** | New stock of test kit arrived |
| **Post-conditions** | **If** the test center manager receives new test kit  **Then**, new test kit will be recorded and display successful notification  **Else**, there is existing stock for test kit then its stock updated |

1. **Record New Test**

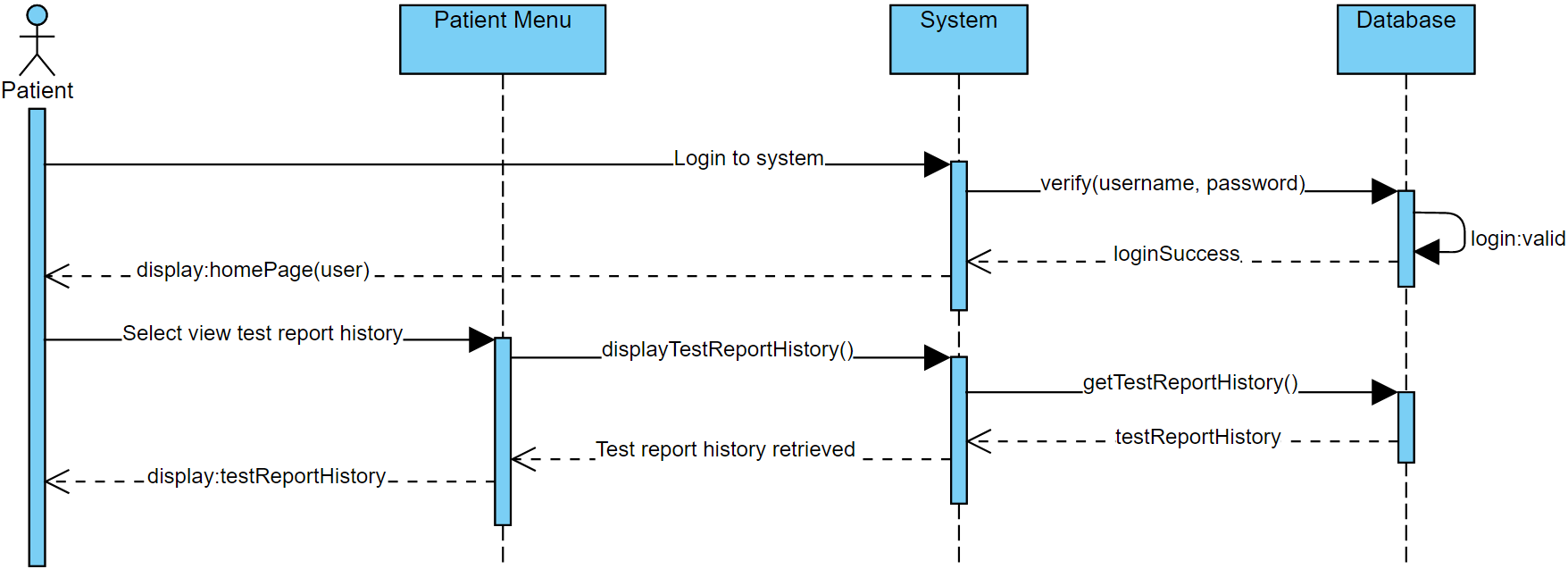


|  |  |
| --- | --- |
| **Cross Reference** | **Record New Test** |
| **Operation** | Login with username and password |
| **Responsible** | To get access for the tester to record new test |
| **Pre-conditions** | Username and password should match |
| **Post-conditions** | The tester enters the matched username and password. Then, system will display the home page. |
| **Cross Reference** | **Record New Test** |
| **Operation** | Tester record new test |
| **Responsible** | To allow the tester to record new test |
| **Pre-conditions** | Patient data (username, password, name, phone number, and address, patient type, symptoms and test kit type) must be available |
| **Post-conditions** | **If** patient never taken a test before  **Then**, patient data will be recorded by the tester and a new test automatically created after that system display successful notification  **Else**, the patient has a test record or taken a test before, the tester only updates the patient type and symptoms, new test automatically created |

1. **Update Test Result**

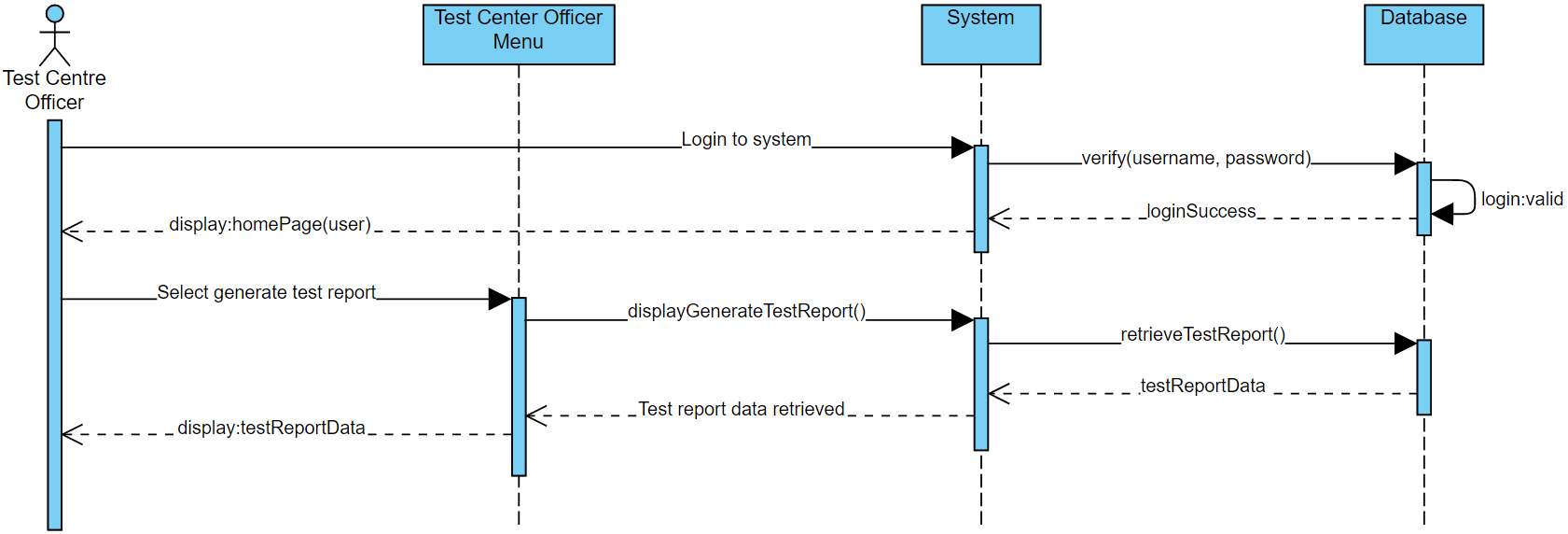


|  |  |
| --- | --- |
| **Cross Reference** | **Update Test Result** |
| **Operation** | Login with username and password |
| **Responsible** | To get access to edit test result of the patient |
| **Pre-conditions** | Username and password should match |
| **Post-conditions** | The tester enters the matched username and password. Then, system will display the home page. |
| **Cross Reference** | **Update Test Result** |
| **Operation** | To update the test details of the patient |
| **Responsible** | To allow the test center officer to manage the test result |
| **Pre-conditions** | * Patient should be registered * Test report should exist * Test result performed already out |
| **Post-conditions** | * Test report of patient data updated * Display successful notification |

1. **View Testing History**

|  |  |
| --- | --- |
| **Cross Reference** | **View Test History** |
| **Operation** | Login with username and password |
| **Responsible** | To get access to view test result of the test patient has taken before |
| **Pre-conditions** | Username and password should match |
| **Post-conditions** | The test center officer or patient enter the matched username and password. Then, system will display the home page. |
| **Cross Reference** | **View Test History** |
| **Operation** | To view the result of the test that has been taken |
| **Responsible** | To allow the patient to view the test result |
| **Pre-conditions** | Patient should have taken the covid-19 test before |
| **Post-conditions** | * System will display the patient profile * System will display the test history of patient |

1. **Generate Test Report**



|  |  |
| --- | --- |
| **Cross Reference** | **Generate Test Report** |
| **Operation** | Login with username and password |
| **Responsible** | To get access to generate test report of the test that have been performed |
| **Pre-conditions** | Username and password should match |
| **Post-conditions** | The test center officer enters the matched username and password. Then, system will display the home page. |
| **Cross Reference** | **Generate Test Report** |
| **Operation** | To generate the result of the test that has been performed in the test center |
| **Responsible** | To allow the test center officer to generate the test result |
| **Pre-conditions** | Test center officer should be registered |
| **Post-conditions** | System will display the generated report of the test result |

## **Database Design (Data Dictionary)**

**Center Officer**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size for Display** | **Description** | **Example** |
| officer\_id | int | 11 | Id of officer | 1 |
| center\_id | int | 11 | Test center ID | 1 |
| username | varchar | 18 | username of user | salsabiladriani |
| password | varchar | 18 | Password of user | example123 |
| name | varchar | 30 | Name of user | Salsabila |
| phone\_number | varchar | 15 | Phone number of user | 08129328321 |
| address | varchar | 100 | Address of user | Denpasar, Bali |
| position | varchar | 8 | Position of center officer | Manager |

**Patient**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size for Display** | **Description** | **Example** |
| patient\_id | int | 11 | ID of patient | 1 |
| username | varchar | 18 | username of user | salsabiladriani |
| password | varchar | 18 | Password of user | example123 |
| name | varchar | 30 | Name of user | Salsabila |
| phone\_number | varchar | 15 | Phone number of user | 08129328321 |
| address | varchar | 100 | Address of user | Denpasar, Bali |
| patient\_type | varchar | 15 | Type of patient user | Returnee |
| symptoms | varchar | 50 | Symptoms of patient | Coughing, Fever, Headache |

**TestCenter**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size for Display** | **Description** | **Example** |
| center\_ id | int | 11 | Unique ID of Test Center | 1 |
| center \_name | varchar | 30 | Test Center Name | Puskesmas I Denpasar |
| Phone\_number | varchar | 15 | Phone number of the Test Center | 081342909876 |
| address | varchar | 100 | Address of Test Center | Denpasar, Bali |

**Test Kit**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size for Display** | **Description** | **Example** |
| kit\_id | int | 11 | Unique ID of Test Kit | 1 |
| center\_id | int | 11 | Test center ID | 1 |
| name | varchar | 30 | Test Kit Name | Sinofac |
| stock | int | 11 | Stock of Test Kit | 20 |
| description | varchar | 50 | Description of Test Kit | Sinofac is a test kit from china |

**CovidTest**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size for Display** | **Description** | **Example** |
| test\_id | int | 11 | Unique ID of Test | 1 |
| patient\_id | int | 11 | Unique ID of patient | 1 |
| officer\_id | int | 11 | Unique ID of cetnter officer | 1 |
| kit\_id | int | 11 | Unique ID of test kit | 1 |
| test\_date | varchar | 25 | Date of test | 01/01/2021 |
| result | varchar | 100 | Result of the test | Positive |
| result\_date | varchar | 25 | Date of test result | 02/01/2021 |
| status | varchar | 9 | Status of patient | Pending |

# **Iteration 1**

## **Identification of the use cases**

1. **I Made Gede Armani Bagus Saputra**

|  |  |
| --- | --- |
| **Use Case** | **Name** |
| Login | I Gede Made Armani Bagus Saputra |
| Register Test Center | I Gede Made Armani Bagus Saputra |
| Record Tester | I Gede Made Armani Bagus Saputra |
| Manage Test Kit | I Gede Made Armani Bagus Saputra |
| Record New Test | I Gede Made Armani Bagus Saputra |

1. **Ni Putu Dwi Candra Pertiwi**

|  |  |
| --- | --- |
| **Use Case** | **Name** |
| Logout | Ni Putu Dwi Candra Pertiwi |
| Manage User Profile | Ni Putu Dwi Candra Pertiwi |
| Update Test Result | Ni Putu Dwi Candra Pertiwi |
| View Test History | Ni Putu Dwi Candra Pertiwi |
| Generate Test Report | Ni Putu Dwi Candra Pertiwi |

## **Test Objectives**

A test is an important step in developing a system information, a test is needed in order to make sure that the program fulfilled all the requirements that have been analyzed before and to find a solution to fix if there is an unusual behavior in the program. In developing a system, fault and failures are something that developer will stumbled upon, it can be caused by missing specification, impossible requirements, fault in system design, in program design and program code. Therefore, developers should be ready and able to handle the errors in the system. Design and Integration test will be performed in the development of this system to, first we will do Fault Identification to determine what faults that caused failure, then we will do Fault Correction/Removal by making changes and find a solution in the design or the coding of this program. For this system, we will focus on testing the design and functional requirements of the system such as:

**Test Objectives : Ni Putu Dwi Candra Pertiwi**

1. User interface design is able to perform and show the page correctly for each user type, all the buttons, links, and pages should be able to direct user to the right pages.
2. System should be able to perform user logout correctly.
3. All user should be able to manage user profile correctly.
4. Tester user should be able to record new test and update test result correctly.
5. Patient user should be able to view their test history

**Test Objectives: I Gede Made Armani Bagus Saputra**

1. User interface design is able to perform and show the page correctly for each user type, all the buttons, links, and pages should be able to direct user to the right pages.
2. System should be able to perform user login correctly.
3. Test Center Manager user should be able to register Test Center, record Tester, and manage test kit correctly.
4. Tester user should be able to record a new test correctly.

## **Test Plan : Ni Putu Dwi Candra Pertiwi**

|  |  |  |  |
| --- | --- | --- | --- |
| Type of Testing | Strategy/Approach | Tools (if any) | Schedule |
| Unit Testing   * Logout * Manage User Profile * Update Test Result * View Test History * Record New Test | Black-Box | PHP-Storm | From yr gantt chart  22/3/21 – 27/04/21 |
| Integration Testing | Black-Box | PHP-Storm | From yr gantt chart  22/3/21 – 27/04/21 |
| Functional Testing | Black-Box | PHP-Storm | From yr gantt chart  22/3/21 – 27/04/21 |
| Non-Functional Testing | Black-Box | PHP-Storm | From yr gantt chart  22/3/21 – 27/04/21 |

## **Test Plan : I Made Gede Armani Bagus Saputra**

|  |  |  |  |
| --- | --- | --- | --- |
| Type of Testing | Strategy/Approach | Tools (if any) | Schedule |
| Unit Testing   * Login * Register Test Center * Record Tester * Manage Test Kit * Generate Test Report | Black-Box | PHP-Storm | From yr gantt chart  22/3/21 – 27/04/21 |
| Integration Testing | Black-Box | PHP-Storm | From yr gantt chart  22/3/21 – 27/04/21 |
| Functional Testing | Black-Box | PHP-Storm | From yr gantt chart  22/3/21 – 27/04/21 |
| Non-Functional Testing | Black-Box | PHP-Storm | From yr gantt chart  22/3/21 – 27/04/21 |

## **Test Result**

### **Unit Testing**

* **Login**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-001 | | | |
| Use Case | Login | | | |
| Test Description | User login by entering username and password and will be directed to the representative homepage | | | |
| Source Code |  | | | |
|  | **Test Data** | **Expected Output** | **Actual Output** | **Remark(s)** |
| Test Case 1: Login user Manager | Username: armanibagus  Password: bagusarmani | User directed to the Center Officer Manager homepage | User directed to the Center Officer Manager homepage |  |
| Test Case 2: Login user Tester | Username: tiwi  Password: tiwitiwi | User directed to the Center Officer Tester homepage | User directed to the Center Officer Tester homepage |  |
| Test Case 3: Login user patient | Username: aan  Password: aan123 | User directed to the Center Officer Patient homepage | User directed to the Center Officer Patient homepage |  |
| Test Case 4:  User doesn’t fill the textbox | Username :  Password: | Pop up error “Empty Field!” | Pop up error “Empty Field!” |  |

* **Logout**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-002 | | | |
| Use Case | Logout | | | |
| Test Description | User logout from the system | | | |
| Source Code |  | | | |
|  | **Test Data** | **Expected Output** | **Actual Output** | **Remark(s)** |
| Test Case 1: | User click the logout button | Back to login page | Back to login page |  |

* **Manage User Profile**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-003 | | | |
| Use Case | Manage User Profile | | | |
| Test Description | User able to edit their profile by editing their data information. | | | |
| Source Code |  | | | |
|  | **Test Data** | **Expected Output** | **Actual Output** | **Remark(s)** |
| Test Case 1: | 1. password: bagus123  2. name: Armani Bagus  3. phone number: 081235779653  4. address: Jl. Raya Puputan No.86, Kota Denpasar, Bali | Data in database updated and data in form updated. | Data in database updated and data in form updated. |  |
| Test Case 2: | Password:  Full Name:  Phone Number:  Address: | System will reload but data in database does not updated | System will reload but data in database does not updated |  |

* **Register Test Center**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-004 | | | |
| Use Case | Register Test Center | | | |
| Test Description | User Manager register the test center after the test center is being approved and Manager account is already created before. | | | |
| Source Code |  | | | |
|  | **Test Data** | **Expected Output** | **Actual Output** | **Remark(s)** |
| Test Case 1: | 1. test center name: Puri Bunda  2. phone number: 036168754311  3. address : JL. Gatot Subroto, Denpasar, Bali, Indonesia | Data will be submitted into database and displayed in the table on the left side of the register form | Data will be submitted into database and displayed in the table on the left side of the register form |  |
| Test Case 2: | Full Name:  Phone Number:  Address: | System will reload but data in database does not updated | System will reload but data in database does not updated |  |

* **Register Tester**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-005 | | | |
| Use Case | Register Tester | | | |
| Test Description | User Manager register the Tester after the test center is registered with position set to Tester | | | |
| Source Code |  | | | |
|  | **Test Data** | **Expected Output** | **Actual Output** | **Remark(s)** |
| Test Case 1: | 1. username: tiwi  2. password: tiwitiwi  3. name: Dwi Candra Pertiwi  4. position: Tester  5. phone number: 081765849329  6. address: Jl. Perang, Badung, Bali | Data will be submitted into database and displayed in the table on the right side of the register form | Data will be submitted into database and displayed in the table on the right side of the register form |  |
| Test Case 2: | 1. username:  2. password:  3. name:  4. position:  5. phone number:  6. address: | System will reload but data in database does not updated | System will reload but data in database does not updated |  |

* **Manage Test Kit Stock**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-006 | | | |
| Use Case | Manage Test Kit Stock | | | |
| Test Description | User Manager Manage test kit stock by adding and updating the available stock of test kit. | | | |
| Source Code | 1. Add Test Kit 2. Update Test Kit | | | |
|  | **Test Data** | **Expected Output** | **Actual Output** | **Remark(s)** |
| Test Case 1: | 1. name: Sinofac  2. Stock : 9998  3. Description: Test Kit from China | Data will be submitted into database and displayed on the table of tester. | Data will be submitted into database and displayed on the table of tester. |  |
| Test Case 2: | 1. name: nasional  2. Stock: 999  3. Description: Test Kit from Indonesia | Data that is chosen to be updated will be updated in the database and the table. | Data that is chosen to be updated will be updated in the database and the table. |  |
| Test Case 3: | 1. name:  2. Stock:  3. Description: | Pop up error “Empty Field!” | Pop up error “Empty Field!” |  |

* **Record New Test**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-007 | | | |
| Use Case | Record New Test | | | |
| Test Description | User Tester recording a new patient and test, also updating the patient data if the patient has already taken a test before | | | |
| Source Code | 1. Record new Test        1. Update Patient Data | | | |
|  | **Test Data** | **Expected Output** | **Actual Output** | **Remark(s)** |
| Test Case 1: | 1. Username: candrapertiwi  2. Password: cand123  3. Name: Candra Pertiwi  4. Phone Number: 08129237347  5. Address: Lingk. Perang Lukluk  6. Patient Type: Close Contact  7. Symptoms: Fever, Coughing  8. Test Kit Type: Rapid | Data will be submitted into database and displayed on the table list of patient. | Data will be submitted into database and displayed on the table list of patient. |  |
| Test Case 2: | 1. Patient type: Quarantined  2. Symptoms: Fever  3. Test Kit Type: Sinofac | Data that is chosen to be updated will be updated in the database and the table. | Data that is chosen to be updated will be updated in the database and the table. |  |
| Test Case 3: | 1. Username:  2. Password:  3. Name:  4. Phone Number:  5. Address:  6. Patient  7. Symptoms:  8. Test Kit Type: | Pop up error “Empty Field!” | Pop up error “Empty Field!” |  |

* **Update Test Result**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-008 | | | |
| Use Case | Update Test Result | | | |
| Test Description | User Tester recording updating the data for the covid test available that has been registered before. | | | |
| Source Code |  | | | |
|  | **Test Data** | **Expected Output** | **Actual Output** | **Remark(s)** |
| Test Case 1: | 1. Test ID: 12  2. Date: 8/April/2021  3. Result: Positive  4. Result Date: 9/April/2021  5. Status: Completed | Data that is chosen to be updated will be updated in the database and deleted from the table of update test result. | Data that is chosen to be updated will be updated in the database and deleted from the table of update test result. |  |
| Test Case 2: | 1. Test ID:  2. Date:  3. Result:  4. Result Date:  5. Status: | Pop up error “Empty Field!” | Pop up error “Empty Field!” |  |

* **View Test Result**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-009 | | | |
| Use Case | View Test Result | | | |
| Test Description | User Patient viewing the details of the test they took to see the result of the covid test. | | | |
| Source Code |  | | | |
|  | **Test Data** | **Expected Output** | **Actual Output** | **Remark(s)** |
| Test Case 1: | Patient select button view details in the table of test report. | System will direct user to the details of test report. | System will direct user to the details of test report. |  |

* **Generate Test Report**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-0010 | | | |
| Use Case | Generate Test Report | | | |
| Test Description | User Manager and Tester generate the test report of a specific test | | | |
| Source Code |  | | | |
|  | **Test Data** | **Expected Output** | **Actual Output** | **Remark(s)** |
| Test Case 1: | User select button view details in the table of test report. | System will direct user to the details of test report. | System will direct user to the details of test report. |  |

### **Integration Testing**

* **Login**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-002 | | | |
| Use Case | User : Login 🡪 Representative Homepage | | | |
| Test Description | Login test to make sure that user is able to login and directed to each of representative homepage. | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | Username: armanibagus  Password: bagusarmanii | Username/Password incorrect. | Username/Password incorrect. |  |
| Test Case 2: | Username: armanibagus  Password: bagusarmani | Directed to the representative homepage. | Directed to the representative homepage. |  |

* **Logout**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-002 | | | |
| Use Case | User : Logout 🡪 Login Page | | | |
| Test Description | Logout test is expected direct the user exit the system and enter the login page | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | User click logout button | User is directed to login page. If user open multiple pages of the system, all the pages will also be directed to login page. | User is directed to login page. If user open multiple pages of the system, all the pages will also be directed to login page. |  |

* **Manage User Profile**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-003 | | | |
| Use Case | User : Login 🡪 Manage User Profile | | | |
| Test Description | Checking if the system is available to perform the function and validate the user input in the textfield. | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. password: bagus123  2. name: Armani Bagus  3. phone number: 081235779653  4. address: Jl. Raya Puputan No.86, Kota Denpasar, Bali | Edit successfully. | Edit successfully |  |
| Test Case 2: | Password:  Full Name: Made Armani  Phone Number:  Address: Jl Raya Kenangan | Edit unsuccessful. | Edit unsuccessful. |  |

* **Register Test Center**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-004 | | | |
| Use Case | Manager : Login 🡪 Register Test Center | | | |
| Test Description | Checking if the system is available to perform the function and validate the user input in the textfield. | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. test center name: Puri Bunda  2. phone number: 036168754311  3. address : JL. Gatot Subroto, Denpasar, Bali, Indonesia | Register successfully. | Register successfully |  |
| Test Case 2: | Full Name: Puri Bunda  Phone Number:  Address: | Register unsuccessful. | Register unsuccessful. |  |

* **Record Tester**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-005 | | | |
| Use Case | Manager : Login 🡪 Record Tester | | | |
| Test Description | Checking if the system is available to perform the function and validate the user input in the textfield. | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. username: tiwi  2. password: tiwitiwi  3. name: Dwi Candra Pertiwi  4. position: Tester  5. phone number: 081765849329  6. address: Jl. Perang, Badung, Bali | Recorded successfully. | Recorded successfully |  |
| Test Case 2: | 1. username:  2. password:  3. name:  4. position: Tester  5. phone number:  6. address: | Record unsuccessful. | Record unsuccessful. |  |

* **Manage Test Kit**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-006 | | | |
| Use Case | Manager : Login 🡪 Manage Test Kit | | | |
| Test Description | Checking if the system is available to perform the function and validate the user input in the textfield. | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. name: Sinofac  2. Stock : 9998  3. Description: Test Kit from China | Recorded successfully. | Recorded successfully |  |
| Test Case 2: | 1. name: Sinofac  2. Stock :  3. Description: | Record unsuccessful. | Record unsuccessful. |  |

* **Record New Test**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-007 | | | |
| Use Case | Tester : Login 🡪 Record New Test | | | |
| Test Description | Checking if the system is available to perform the function and validate the user input in the textfield. | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. Username: candrapertiwi  2. Password: cand123  3. Name: Candra Pertiwi  4. Phone Number: 08129237347  5. Address: Lingk. Perang Lukluk  6. Patient Type: Close Contact  7. Symptoms: Fever, Coughing  8. Test Kit Type: Rapid | Recorded successfully. | Recorded successfully |  |
| Test Case 2: | 1. Username:  2. Password:  3. Name:  4. Phone Number:  5. Address:  6. Patient  7. Symptoms:  8. Test Kit Type: | Record unsuccessful. | Record unsuccessful. |  |

* **Update Test Result**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-008 | | | |
| Use Case | Tester : Login 🡪 Update Test Result | | | |
| Test Description | Checking if the system is available to perform the function and validate the user input in the textfield. | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. Test ID: 12  2. Date: 8/April/2021  3. Result: Positive  4. Result Date: 9/April/2021  5. Status: Completed | Updates successfully. | Updated successfully |  |
| Test Case 2: | 1. Test ID: 10  2. Date:  3. Result: positive  4. Result Date:  5. Status: | Update unsuccessful. | Record unsuccessful. |  |

* **View Test History**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-009 | | | |
| Use Case | Patient : Login 🡪 View Test Report | | | |
| Test Description | Checking if the system is available to perform the function and show the detailed test report. | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | Test result should be updated by tester | View Detailed Test Report | View Detailed Test Report |  |
| Test Case 2: | Test result haven’t been updated by tester | View Detailed test report but a few field will be empty. | View Detailed test report but a few field will be empty. |  |

* **Generate Test Report**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-0010 | | | |
| Use Case | User Officer : Login 🡪 Generate Test Report | | | |
| Test Description | Checking if the system is available to perform the function and show the detailed test report. | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | User click on the data that will be generated | View Detailed Test Report | View Detailed Test Report |  |

### **System Testing**

* **Functional Requirement**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-001 | | | |
| Use Case | Login | | | |
| Test Description | User login to the system | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. username = “armanibagus” 2. password = “bagusarmani” | Direct to Manager home page | Manager home page |  |
| Test Case 2: | 1. username = “tiwi” 2. password = “tiwitiwi” | Direct to Tester home page | Tester home page |  |
| Test Case 3: | 1. username = “aan” 2. password = “aan123” | Direct to Patient home page | Patient home page |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-002 | | | |
| Use Case | Logout | | | |
| Test Description | User logout from the system | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | User (Manager/Tester/Patient) click Logout button | Direct to Login page | Login page |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-003 | | | |
| Use Case | Manage User Profile | | | |
| Test Description | Edit User Profile | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. password = “bagus123” 2. name = “Armani Bagus” 3. phone number = “081235779653” 4. address = “Jl. Raya Puputan No.86, Kota Denpasar, Bali” | Direct to My Profile page and user data will be changed | Direct to My Profile page and user data changed |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-004 | | | |
| Use Case | Register Test Center | | | |
| Test Description | Register the Test Center | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. test center name = “Puri Bunda” 2. phone number = “036168754311” 3. address = “JL. Gatot Subroto, Denpasar, Bali, Indonesia” | Direct to Register Test Center page, register form will be disappear, and test center data will be displayed in the table | Direct to Register Test Center page, register form disappear, and test center data displayed in the table |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-005 | | | |
| Use Case | Record Tester | | | |
| Test Description | Record new Tester | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. username = “tiwi” 2. password = “tiwitiwi” 3. name = “Dwi Candra Pertiwi” 4. position = “Tester” 5. phone number = “081765849329” 6. address = “Jl. Perang, Badung, Bali” | Direct to Record Tester page and List of Tester table will be updated | Direct to Record Tester page and List of Tester table updated |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-006 | | | |
| Use Case | Manage Test Kit | | | |
| Test Description | Add new Test Kit and edit an existing Test Kit | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. Manager click add button in the test kit table 2. test kit name = “Rapid” 3. stock = “100” 4. description = “Covid-19 test kit using Rapid test kit” | Direct to Manage Test Kit page and Test Kit table will be updated | Direct to Manage Test Kit page and Test Kit table updated |  |
| Test Case 2: | 1. Manager click update button in right side of the specific test kit table 2. test kit name = “Rapid” 3. stock = “200”   description = “Covid-19 test kit using Rapid test kit” | Direct to Manage Test Kit page and Test Kit details will be updated | Direct to Manage Test Kit page and Test Kit details updated |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-007 | | | |
| Use Case | Record New Test | | | |
| Test Description | Register new Patient, update Patient details, the test automatically created, the test date set to current date, and the status is set to Pending after the Tester successfully register or update Patient details | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. Tester click add button in the patient table 2. username = “aan” 3. password = “aan123” 4. name = “Aan Nurjana” 5. phone number = “089765345231” 6. address = “Jl. Kenanga, Denpasar, Bali” 7. patient type = “Infected” 8. symptoms = “fever, headache, flu” 9. test kit type = “Rapid” | Direct to Record New Test page and the patient table will be updated | Direct to Record New Test page and the patient table updated |  |
| Test Case 2: | 1. Tester click update button in right side of specific patient table 2. patient type = “Quarantined” 3. symptoms = “flu and fever” 4. test kit type = “Rapid” | Direct to Record New Test page and the patient details will be updated | Direct to Record New Test page and the patient details updated |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-008 | | | |
| Use Case | Update Test Result | | | |
| Test Description | Update Test result with Test status Pending | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. Tester click update button in right side of specific Covid-19 Test Report table 2. result = “Positive Covid-19” 3. result date = “01/04/2021” 4. status = “Complete” | Direct to Update Test Result page and the Covid-19 Test Report table will be updated | Direct to Update Test Result page and the Covid-19 Test Report table updated |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-009 | | | |
| Use Case | View Test History | | | |
| Test Description | User Patient viewing the details of the test they took to see the result of the covid test | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | Patient select button view details in the table of test report | System will direct patient to the details of test report page | System direct patient to the details of test report |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-010 | | | |
| Use Case | Generate Test Report | | | |
| Test Description | User Manager and Tester generate the test report of a specific test | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | User (Manager/Tester) select button view details in the table of test report | System will direct user to the details of test report page | System will direct user to the details of test report page |  |

Non-Functional Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-001 | | | |
| Use Case | Login | | | |
| Test Description | User login to the system | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. username = “” 2. password = “” | An error message will be displayed | An error message displayed |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-002 | | | |
| Use Case | Logout | | | |
| Test Description | User logout from the system | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | User (Manager/Tester/Patient) click Logout button | Direct to Login page | Login page |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-003 | | | |
| Use Case | Manage User Profile | | | |
| Test Description | Edit User Profile | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. password = “” 2. name = “” 3. phone number = “” 4. address = “” | An error message will be displayed | An error message displayed |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-004 | | | |
| Use Case | Register Test Center | | | |
| Test Description | Register the Test Center | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. test center name = “” 2. phone number = “” 3. address = “” | An error message will be displayed | An error message displayed |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-005 | | | |
| Use Case | Record Tester | | | |
| Test Description | Record new Tester | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. username = “” 2. password = “” 3. name = “” 4. position = “” 5. phone number = “” 6. address = “” | An error message will be displayed | An error message displayed |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-006 | | | |
| Use Case | Manage Test Kit | | | |
| Test Description | Add new Test Kit and edit an existing Test Kit | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. Manager click add or update button in the table 2. test kit name = “” 3. stock = “” 4. description = “” | An error message will be displayed | An error message displayed |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-007 | | | |
| Use Case | Record New Test | | | |
| Test Description | Register new Patient, update Patient details, the test automatically created, the test date set to current date, and the status is set to Pending after the Tester successfully register or update Patient details | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. Tester click add button in the patient table 2. username = “” 3. password = “” 4. name = “” 5. phone number = “” 6. address = “” 7. patient type = “” 8. symptoms = “” 9. test kit type = “” | An error message will be displayed | An error message displayed |  |
| Test Case 2: | 1. Tester click update button in right side of specific patient table 2. patient type = “” 3. symptoms = “” 4. test kit type = “” | An error message will be displayed | An error message displayed |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-008 | | | |
| Use Case | Update Test Result | | | |
| Test Description | Update Test result with Test status Pending | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | 1. Tester click update button in right side of specific Covid-19 Test Report table 2. result = “” 3. result date = “” 4. status = “” | An error message will be displayed | An error message displayed |  |

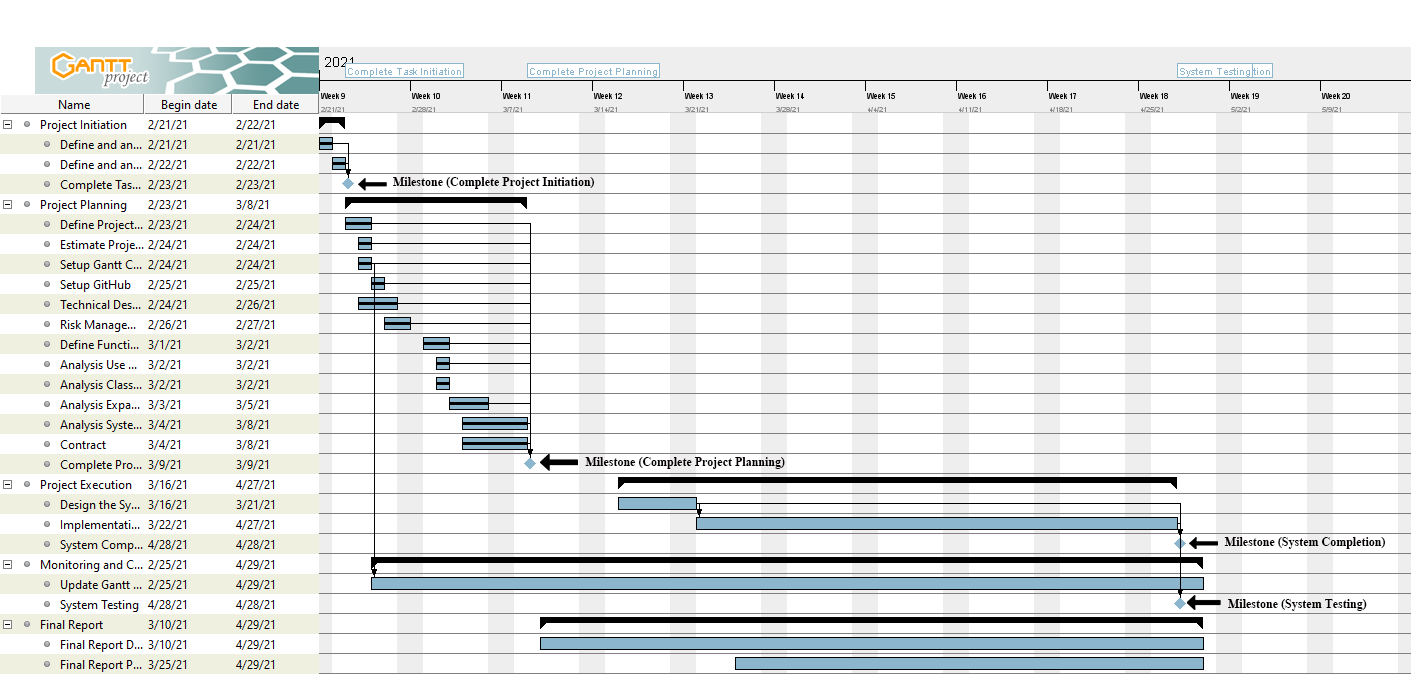
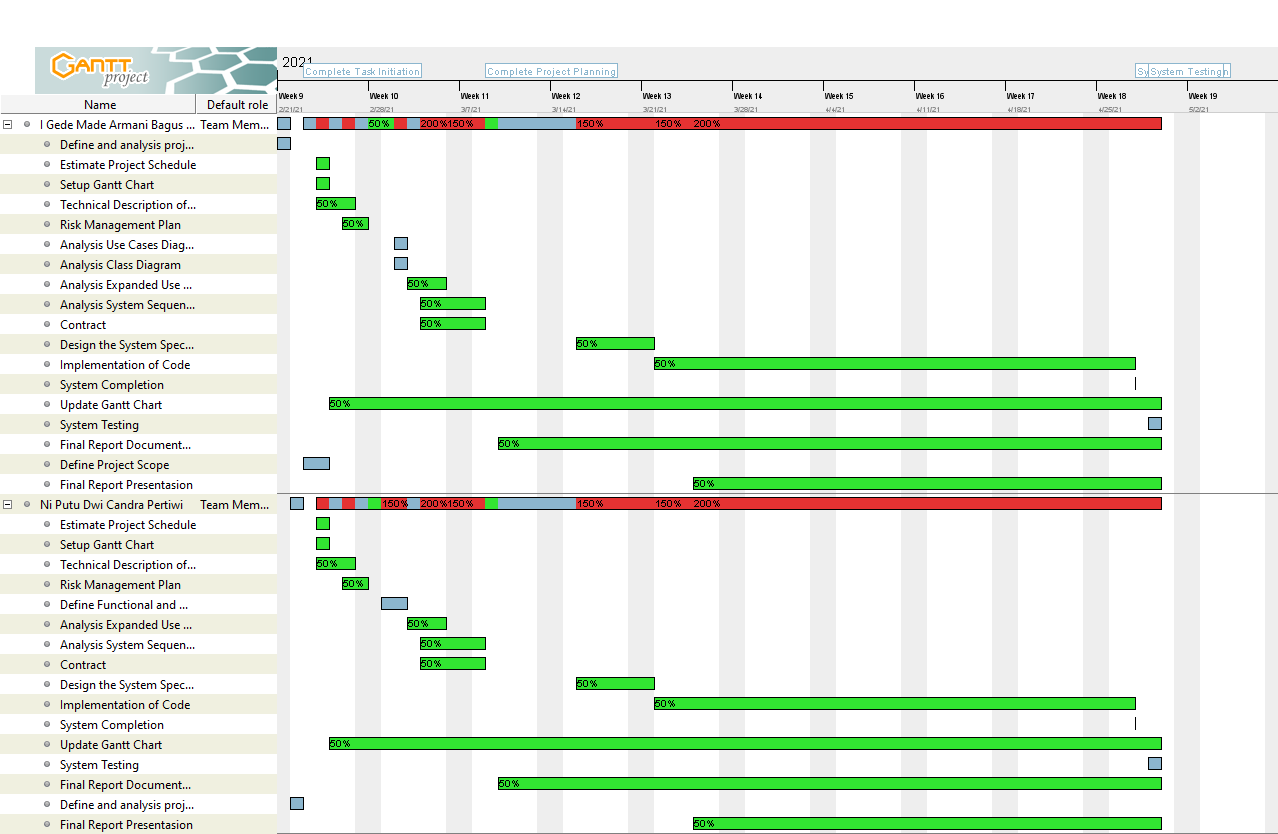
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-009 | | | |
| Use Case | View Test History | | | |
| Test Description | User Patient viewing the details of the test they took to see the result of the covid test | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | Patient select button view details in the table of test report before the Test result updated by Tester | System will direct patient to the details of test report, but a few field will be empty | System direct patient to the details of test report, but a few field will be empty |  |

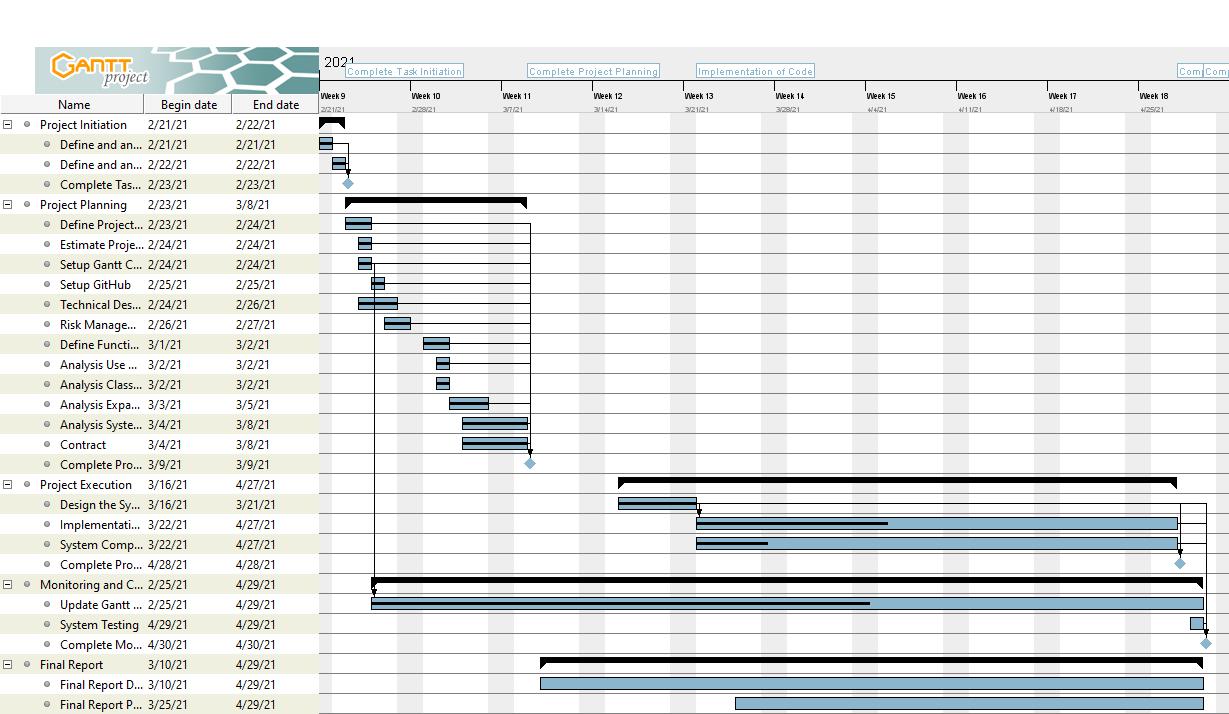
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | R-010 | | | |
| Use Case | Generate Test Report | | | |
| Test Description | User Manager and Tester generate the test report of a specific test | | | |
|  | Test Data | Expected Output | Actual Output | Remark(s) |
| Test Case 1: | User (Manager/Tester) select button view details in the table of test report | System will direct user to the details of test report, but a few field will be empty | System will direct user to the details of test report, page but a few field will be empty |  |

## **Test Analysis Report**

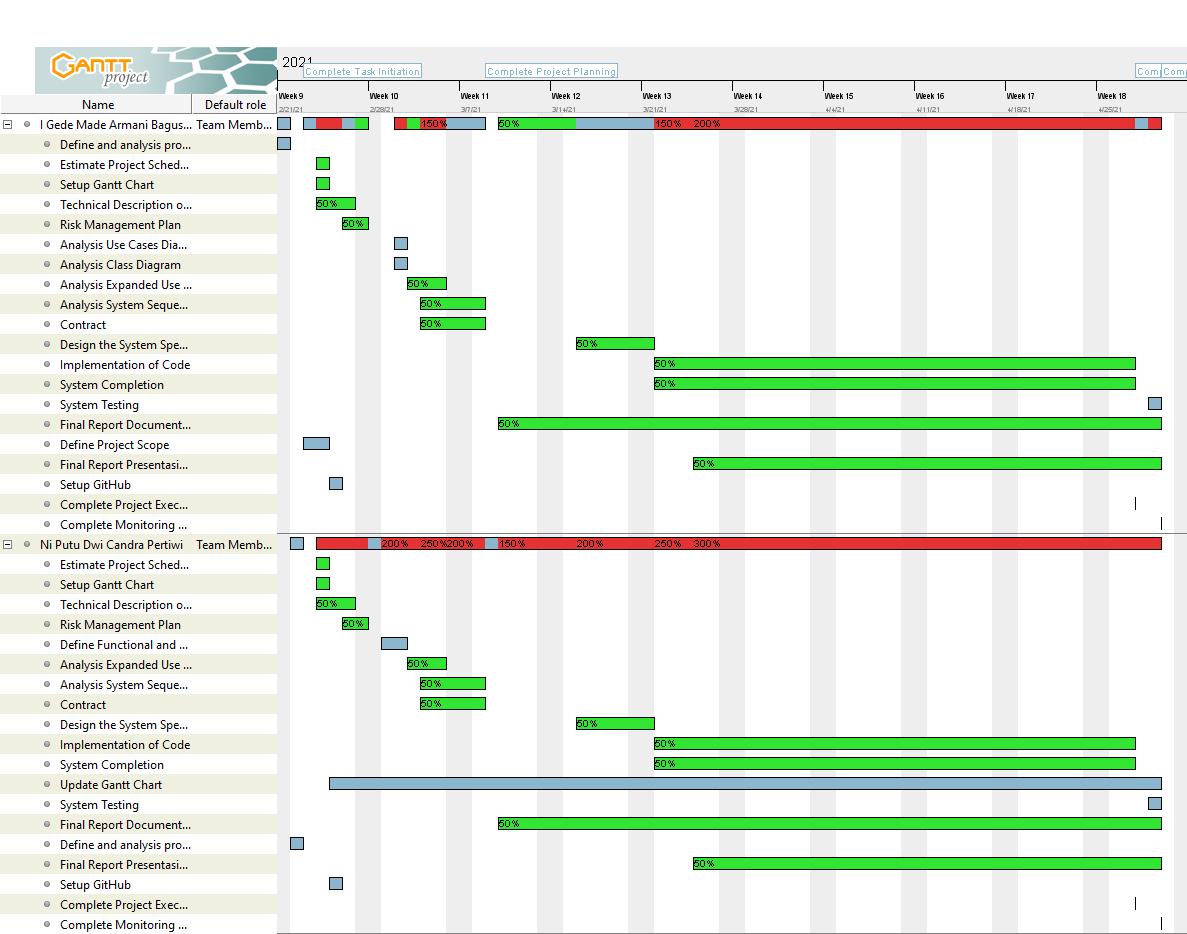
Many tests had been performed for this system, each of the use cases that have been finished are tested by each individual that is responsible of the use case. All functional and Non-Functional requirements were also checked according to plan and the test data that have been prepared beforehand. Overall, the system is working according to the intended design, it is executed well. However, a few parts of the use cases don’t have system validation and private data such as user password is not encrypted yet.

## **Gantt Chart Update**

*  **Timeline**
* **Resource**
* **Updated Timeline**



* **Updated Resource**



# **Appendix A – Peer Evaluation (Ni Putu Dwi Candra Pertiwi)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Skills** | **4 Advanced - exceeds expectations** | **3 Competent - meets expectations** | **2 Progressing - does not fully meet expectations** | **1 Beginning - does not meet expectations** | **Score** |
| Contributions & Attitude | Always cooperative. Routinely offers useful ideas. Always displays positive attitude. | Usually cooperative. Usually offers useful ideas. Generally displays positive attitude. | Sometimes cooperative. Sometimes offers useful ideas. Rarely displays positive attitude. | Seldom cooperative. Rarely offers useful ideas. Is disruptive. | 4 |
| Cooperation with Others | Did more than others. Highly productive.  Works extremely well with others. | Did own part of workload. Cooperative. Works well with others. | Could have shared more of the workload. Has difficulty. Requires structure, directions, and  leadership. | Did not do any work. Does not contribute. Does not work well with others. | 3 |
| Focus, Commitments | Tries to keep people working together.  Almost always focused on the task. Is very self- directed. | Does not cause problems in the group. Focuses on the task most of the time. Can count on this person. | Sometimes focuses on the task. Not always a good team member. Must be prodded and reminded to keep on  task. | Often is not a good team member. Does not focus on the  task. Lets others do the work. | 4 |
| Ability to Communicate | Always listens to, shares with, and supports the efforts of others.  Provides effective feedback. Relays a lot of relevant information. | Usually listens to, shares with, and supports the efforts of others.  Sometimes talks too much. Provides some effective feedback. Relays some basic information that relates to the topic. | Often listens to, shares with, and supports the efforts of others. Usually does most of the talking. Rarely listens to others. Provides little feedback. Relays very little information that relates to the topic. | Rarely listens to, shares with, or supports the efforts of others. Is always talking and never listens to others. Provides no feedback. Does not relay any information to teammates. | 4 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Accuracy - documentation/coding etc | Work is complete, well- organized, error-free, and done on time or early. | Work is generally complete, meets the requirements of the task, and is mostly done on time. | Work tends to be disorderly, incomplete, inaccurate, and is usually late. | Work is generally sloppy and incomplete, contains excessive errors, and is mostly  late. | 3 |
|  | | | | TOTAL | 18/20 |

Provide appropriate **measurables/milestones/deliverables** to support your answers for the following questions:

1. How effectively did your group work?

**🡺** Our group works effectively because we always try to maintain good communication, there were times when we had difficulty to meet an agreement, but through communicating and brainstorming together we managed to handle a good team work and effective performance in the process of development of this project.

1. Were the behaviors of any of your team members particularly valuable or detrimental to the team? Explain.

🡺 One of my partner behaviors that was particularly very valuable to me was when my teammate pointed out a mistake that I made by patiently explaining to me what I did wrong, it was very valuable to me because I personally rather quite slow to understand a task, and my team mate helped me a lot by guiding and giving explanation on what part of the task I didn’t understand.

1. What did you learn about working in a group from this project that you will carry into your next group experience (e.g. assignment 3)?

🡪 I have learned so many things from working in a group for this project, such as team work, communication and brainstorming ideas. This project gave me opportunity to explore more of my ability. The collaboration between me and the team member helped me to learn more from his knowledge and mine.

# **Appendix A – Peer Evaluation (I Made Gede Armani Bagus Saputra)**

|  |  |  |  |  |  |
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|  | | | | TOTAL | 18/20 |

Provide appropriate **measurables/milestones/deliverables** to support your answers for the following questions:

1. How effectively did your group work?

**🡺** Our group works effectively because we always maintain good communication between each other for completing our task and for discussion for this project. At the times we had difficulties in making something for this project we always help each other to make a better project result.

1. Were the behaviors of any of your team members particularly valuable or detrimental to the team? Explain.

🡺 My partner behaviors were valuable to me when my teammate correcting my mistake or explain something that I didn’t understand she would be explaining it patiently until I got the point. Also, she always maintains good communication in making this project and helps me whenever I needed it.

1. What did you learn about working in a group from this project that you will carry into your next group experience (e.g. assignment 3)?

🡺 I have learned many things in team work for this project such as the importance of communication among team members, teamwork, and brainstorming.