

Software Requirements Specification
for
Xposure: Personal Radiation Management

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Revision History

Revision	Date	Author(s)	Description
1.0	25.10.2018	G.Grossman	Document Creation
2.0	25.10.2018		
3.0	25.10.2018		
4.0	25.10.2018		

1 Functional Requirements

ID: FR1

TITLE: Opening Mobile application

DESC: Application must open to test history page.

RAT: For main page to display all user's testing history.

DEP:

ID: FR2

TITLE: Sorting history

DESC: Main page must have option to sort test history by date, referring doctor, location, or type of test. Default must be sorted by date.

RAT: For easy retrieval of testing history.

DEP: FR4

ID: FR3

TITLE: Open detail page

DESC: When a test is selected, it will open a new page with all test details (type of test, date, location, referring doctor, photos, notes).

RAT: For easy access and view of details of testing history.

DEP: FR1, FR4

ID: FR4

TITLE: Add new test

DESC: On main page, there will be a button to add a new test. When a user clicks this button a new page will open to add a new test. This page must enable the user to input new test details by entering test type, date, location, referring doctor, uploading a photo, and any notes.

RAT: Enable user to add new test

DEP: FR1

ID: FR5

TITLE: Test type drop down menu

DESC: When adding a new test, the user must select the test type from a drop down menu.

RAT:FR6 To maintain consistency for names of test types.

DEP: FR1, FR4

ID: FR6

TITLE: Manually entered test information

DESC: When adding a new test, the user must manually type in the name of the referring doctor, the location, and any extra notes.

RAT: There are too many names and locations to be organized in a dataset. The user is able to customize the application to include their doctors and locations.

DEP: FR1, FR4, FR3

ID: FR7

TITLE: Save Report

DESC: On every test detail page, there must be a button to give user the option to save a report summary of the test as either a file or picture on their phone.

RAT: Patient is able to send specific test information to another party (ie. email to doctor's office)

DEP: FR1, FR4

ID: FR8

TITLE: Delete test

DESC: On every test detail page, the user must be able to delete this test from their history by selecting the delete button. When clicking this button, the user will be asked to verify if they want to delete this test, by selecting yes or no.

RAT: Allow the user to delete a test if it was entered in error, and asked to verify if they accidentally clicked the delete button.

DEP: FR1, FR4

1.1 Use Cases

Table 2: Use Case Describing Adding a Test

Use Case Name: Add Test ID: UC-1	Importance Level: High
Primary Actor: Patient	
Short Description: Add new test to the database with specific parameters	
Trigger: Clicking add new test button	
Type: External	
Major Inputs: Test name, location, date, referring doctor	Major Outputs: Test information stored in database
Major Steps Preformed: 1. User clicks button to add new test 2. New page opens with empty fields to input testing information. 3. User selects appropriate test from drop-down menu. 4. Selects appropriate date from calendar. 5. User manually types in the name of the referring doctor. 6. User manually types location of test. 7. User clicks save button.	Information for Steps: 1. Adds new test 2. New test page. 3 - 6. Test information. 7. Saves test information.

Table 3: Use Case Describing Sorting Tests

Use Case Name: Sort Test ID: UC-2		Importance Level: High
Primary Actor: Patient		
Short Description: Add new test to the database with specific parameters		
Trigger: Clicking add new test button		
Type: External		
Major Inputs: Previous tests entered to sort		Major Outputs: Test list sorted to find tests
Major Steps Preformed: 1. User clicks "sorted by" button. 2. User selects desired sorting method (by date, doctor, location, type of test) 3. Testing is re organized in history to view by desired sort method. 4. User locates test to review.		Information for Steps: 1. Triggering sort menu. 2. Desired sorting method. 3. Test history organized. 4. Easier to find test.

1.2 Use Case Diagram

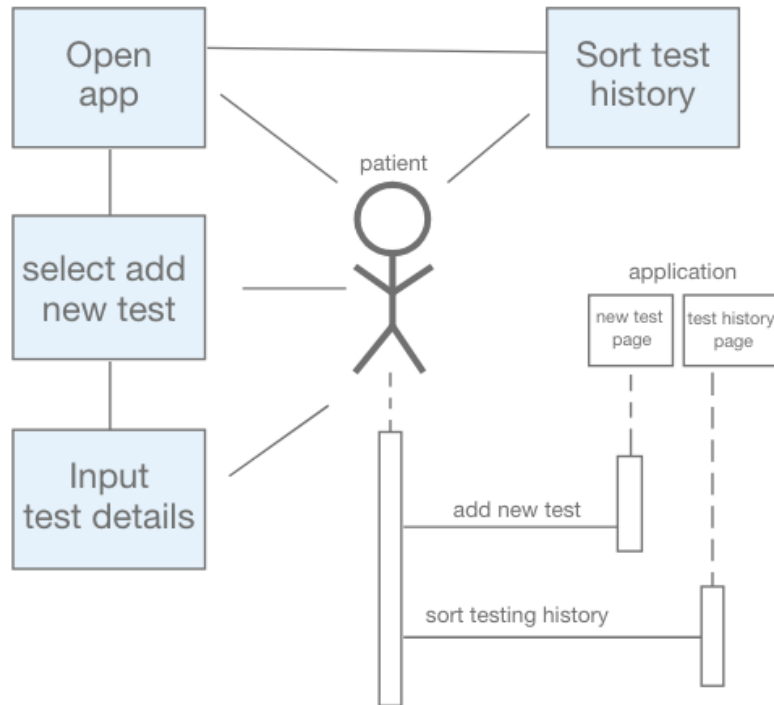


Figure 1: A Use Diagram for Major Functional Requirements

2 Nonfunctional Requirements

2.1 Reliability

ID: NFR1

TITLE: System Reliability

DESC: The reliability that the system gives the right result upon searching for a specific database entry

METER: 100 searches during testing

MUST: 98 percent of the searches must pass

2.2 Availability

ID: NFR2

TITLE: System Availability

DESC: The system availability on average

METER: 100 hours of use during testing

MUST: 98 percent of the time it must pass

2.3 Interoperability

ID: NFR4

TITLE: System Information Interoperability

DESC: The system information must be able to be downloaded and read by other systems

RAT: This is to promote the sharing of healthcare information

2.4 Privacy

ID: NFR3

TITLE: Privacy

DESC: Privacy of patient information in database

METER: Phone must be logged into to get access to the app, check on 100 tests to access **MUST:** 100 percent of tests must pass

2.5 Maintainability

ID: NFR4

TITLE: Extendability

DESC: Code should be modular and easy to implement new functions in and with

RAT: To easily implement future functions

ID: NFR5

TITLE: Testability

DESC: Code should be easily testable with created testing environments

RAT: To easily ensure correctness of application

2.6 Portability

ID: NFR6

TITLE: Portability

DESC: Program adapted to work on multiple portable platforms

RAT: Application is meant for mobile devices and thus will be portable

2.7 Performance

ID: NFR7

TITLE: Response Time

DESC: How quickly information will load

METER: Measurements will be obtained from 100 test searches

MUST: 100 percent of time it must be fully loaded in 2 seconds

3 External Interface Requirements

3.1 User Interfaces

The user interface will comply with the current standards for accessible design. It will have a clean, simple, modern feel.

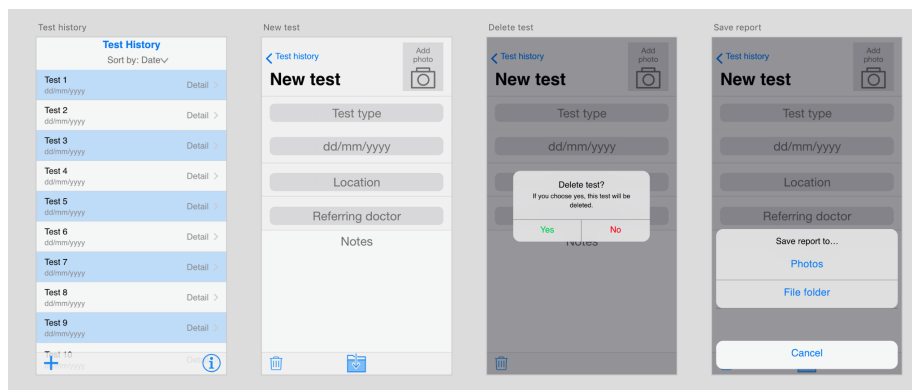


Figure 2: A preliminary user interface design for the first prototype

3.2 Hardware Interfaces

The user is required to have an Android or iOS mobile device with the latest updates.

4 Database Requirements

The database will be stored locally on the users device.