Medical Record System Software (MRSS)

Test Plan

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1. Introduction

1.1 Purpose

The purpose of this document is to present the stakeholders with the description of the software requirements for the MRRS. The document also captures other requirements that are required by the customer. This software will act as the mediator between the doctor and the patient.

The document introduces:

* Test Strategy: The test will be based on, including the givens of the project; description of the process to set up a valid test.
* Execution Strategy: It describes how the test will be performed and process to identify and report defects, and to fix and implement fixes.

Test Management: Process to handle the logistics of the test and all the events that come up during execution.

1.2 Overview

The next chapter, the General Description section, provides high level view of the functionality of the application which helps in understanding the functional requirements stated in chapter three and also states any constraints set for the developer to design the application, the non-functional requirements, and interface requirements required for the application. The document further includes the analysis models like use case diagram, sequence diagrams in chapter four. The fifth chapter explains the application using the operational scenario which explains any important specific scenarios.

1.3 Test Plan

|  |  |  |  |
| --- | --- | --- | --- |
| Test ID | Description | Expected Results | Actual Results |
| 1.1 | User starts the MRSS application and system provides with Home Page. | The system displays Home Page. | PASS |
| 1.2 | User clicks on Home tab on Home Page. | The system displays the same page. | PASS |
| 1.3 | User clicks on About tab on Home Page. | The system displays the About Us page. | PASS |
| 1.4 | User clicks on Services tab on Home Page. | The system displays the Services page. | PASS |
| 1.5 | User clicks on Contact tab on Home Page. | The system displays the Contact page. | PASS |
| 1.6 | User clicks on Doctor Login on Home Page. | The system directs to Doctor Login page. | PASS |
| 1.7 | User clicks on Patient Login on Home Page. | The system directs to Patient Login page. | PASS |
| 1.8 | User clicks on Nurse Login on Home Page. | The system directs to Nurse Login page. | PASS |
| 1.9 | User clicks on Facebook logo. | The system directs to [www.facebook.com](http://www.facebook.com) | PASS |
| 1.10 | User clicks on Twitter logo. | The system directs to [www.twitter.com](http://www.twitter.com) | PASS |
|  |  |  |  |
| 2.1 | User inputs his username and password. | The systems checks for username and password and validates if any field is empty or invalid. | PASS |
| 2.2 | User clicks on Doctor Login | The system directs to respective page. | PASS |
| 2.3 | User clicks on Register. | The system displays the Registration form with the empty fields including first name, last name, Email, password, Age, State. | PASS |
| 2.4 | User inputs his/her first name, last name, Email, password, Age, State. | The system alerts the user if the Email format is wrong, any required field is missing or the password does not match. | PASS |
| 2.5 | User clicks on Go to Home page. | The system directs to Home page. | PASS |
|  |  |  |  |
| 3.1 | User clicks on Search tab. | The system shows input field to enter SSN. | PASS |
| 3.2 | User enters SSN. | The system displays record of Patient if SSN is matched. | PASS |
| 3.3 | User clicks on Appointments tab. | The system shows button of Appointments. | PASS |
| 3.4 | User clicks on View Appointments. | The systems displays scheduled Appointments | PASS |
| 3.4 | User clicks on Register Nurse tab. | The system shows button of Register. | PASS |
| 3.5 | User clicks on Register button. | The systems displays blank registration form | PASS |
| 3.6 | User clicks on Download tab. | The system shows two inputs of first name and last name and a Choose File button to download file. | PASS |
| 3.7 | User clicks Choose File button. | The system opens a window where he/she can browse the file and select the one he/she wants. | PASS |
| 3.8 | User clicks Save button. | The file has been saved in data base. | PASS |
| 3.9 | User clicks on Logout button. | The system directs to Home page. | PASS |
|  |  |  |  |
| 4.0 | User clicks on Patient Login | The system displays Patient home page. | PASS |
| 4.1 | User clicks on Register. | The system displays the Registration form with the empty fields including Personal Details, Emergency Contacts and Medication History. | PASS |
| 4.2 | User inputs Personal Details, Emergency Contacts and Medication History. | The system alerts the user if the Email format is wrong, any required field is missing or the password does not match. | PASS |
| 4.3 | User clicks on Appointments tab. | The system shows button of Appointments. | PASS |
| 4.4 | User clicks on Schedule Appointments. | The system directs to schedule Appointments page. | PASS |
| 4.5 | User clicks on Prescription tab. | The system displays Download Prescription button. | PASS |
| 4.6 | User clicks on Download button. | The system downloads the prescription. | PASS |
| 4.7 | User clicks on Profile tab. | The system shows edit profile button. | PASS |
| 4.8 | User clicks on edit profile button. | The system displays a patient record which has to be edited Only personal details can be edited. | PASS |
| 4.9 | User clicks on Logout button. | The system directs to Home page. | PASS |
|  |  |  |  |
| 5.0 | User clicks on Nurse Login | The system shows Nurse home page. | PASS |
| 5.1 | User clicks on Appointments tab. | The system shows button of Appointments. | PASS |
| 5.2 | User clicks on Schedule Appointments. | The system directs to schedule Appointments page. | PASS |
| 5.3 | User clicks on edit profile button. | The system displays a patient record which has to be edited. | PASS |
| 5.4 | User clicks on upload tab. | The system shows two inputs of first name and last name and a Choose File button to upload file. | PASS |
| 5.5 | User clicks Choose File button. | The system opens a window where he/she can browse the file and select the one he/she wants. | PASS |
| 5.6 | User clicks Save button. | The file has been saved in data base. | PASS |
| 5.7 | User clicks on Logout button. | The system directs to Home page. | PASS |

2. Test Strategy

2.1 Test Objectives

The objectives of the test are to verify that the functionality of the system works according to the specification. Test objectives should be reviewed with all project stakeholders for completeness and agreement before moving on to more detailed test strategy development.

2.2 Test Assumption

**Key Assumptions**

* Data required and be available in the system prior to the Functional Testing

**General**

* The Test Team assumes all necessary inputs required during Test Design and Execution will be supported by Development.
* Project Analyst/Lead will review and sign off all Test cases prepared by Team prior to the start of Test Execution.
* Project Analyst/Lead will review and sign off all test deliverable.

2.3 Test Principle

* Testing will be focused on meeting the objectives, cost efficiency, and quality.
* There will be common, consistent procedures for all team supporting testing activities.
* Testing will be divided into distinct phases, each with clearly defined objectives and goals.

2.4 Test Types

* Unit Testing

1. **Static testing:** During static testing, software work products are examined manually, or with a set of tools, but not executed. Types of defects that are easier to find during static testing are: deviation from standards, missing requirements, design defects, non-maintainable code and inconsistent interface specifications.

2. **Dynamic Testing:** With dynamic testing methods, software is executed using set of input values and its output is then examined and compared to what is expected. As a consequence, dynamic testing can only be applied to software code. Dynamic execution is applied as a technique to detect defects and to determine quality attributes of the code.

2.5 Test Deliverables

This section lists all the test deliverables provided after the testing of the software.

* Software Requirement Specification (SRS)
* Software Test Plan

3. Test Management Process

3.1 Unit testing Tool

**JUnit**

* **JUnit** is a unit testing framework for the Java programming language.**JUnit** has been important in the development of test-driven development, and is one of a family of unit testing frameworks which is collectively known as xUnit that originated with SUnit.
  1. Functional testing tool.

**Selenium - Functional testing tool.**

* It provides full control on the web pages, by allowing access to view sources, DOM elements and complete navigation.
* [**Selenium IDE**](http://seleniumhq.org/projects/ide) is a Firefox add-on that can record the user actions in the form of script, which can reply again in the browser.
  1. Test Risk and Mitigation Factor

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Risk Factors** | **Low** | **Medium** | **High** | **Mitigation Ideas** |
| **1) Project Size (Duration or Effort)** | < 4 Months or  < 1000 Hours | 4-6 Months or  1000 to 3000 Hrs | > 6 Months or  > 3000 Hours | * Decomposition (Break into smaller phases) * Phased implementation |
| **2) Project Scope** | Defined and Not Large or Complex | Somewhat Defined/ Large/ Complex | Not Defined or Large/Complex | * Decomposition * Add another analysis phase * Detailed specifications * Early prototype/review of functionality * Add more time to the project schedule. |
| **3) Project Decision-Making** | One sponsor & One decision- maker | Sponsoring/ Decision making committee | No Clear Sponsor/Decision- maker | * Specify decision-makers’ role in project documentation * Add tasks to the Project Plan for involving decision-makers and managing relationship with them |
| **4) Environmental State (Software/Hardware/Network)** | Stable / Little Change Required | Transitional with Some Changes | Volatile or Yet to be Deployed | * Additional testing, particularly stress testing * Training on new environment * Find other projects using a similar environment to compare notes * Get a prototype deployed ASAP on new environment |
| **5) Team’s Experience (with environment/project size/scope)** | Extensive  (2 or more similar projects) | Moderate  (at least one similar project) | Limited  (No similar project completed) | * Additional team training * Cross-training * Consider hiring consultant with additional experience for initial period |
| **6) Impact on other CDL Operations** | None or Very Little | Some Change | Extensive Changes | * Additional User Training * On-site assistance for cutover period * Phased cutover * Expose key stakeholders to prototype early |
| **7) Project Schedule created by:** | Project team with standard estimation methods | Project team using some rough guesses based on limited info. | Mandate from an external source | * Supplement resources (outside consultants, other groups) * Try to reduce scope of deliverable. * Is there a minimum level of functionality for the mandated delivery date? * Add time to the schedule to allow for slippage. |

4. Environmental Requirements

4.1 Hardware Requirements

1. Desktop/Laptop
2. Database Server
3. Web Browser(Chrome, Firefox, Safari or IE)

4.2 Software Requirements

1. Java (Eclipse as IDE)
2. Microsoft SQL
3. HTML, CSS and JavaScript

5. Approvals:

The name and title of a person who must approve test plan.

|  |  |
| --- | --- |
| Signature |  |
| Name | Ms. Lidia Morrison |
| Role | Course-Advisor |
| Date | 05/07/2015 |

6. References

* ATC API Test Plan v01.04
* Software test documentation-IEEE 829 standard for software testing documentation.
* Notes given by Prof. Lidia Morrison
* Test Plan Samples provided by Prof. Lidia Morrison