2022

PATIENT RECORD MANAGEMENT SYSTEM (PRMS)

Project plan prepared for St. Joseph Marcy Hospital

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1. <u>Introduction</u>

1.1 Overview:

St. Joseph Mercy Hospital currently uses a paper based system to manage its patient records which is tideaous to maintain. This document sets out a plan-driven aproach to the development and impementation of an automated Patient Record Management System (PRMS) which is aimed at replacing that paper based record keeping system at the Hospital to allow for more efficent management its patient records.

1.2 Objectives:

- To review the current manual system and optimize it.
- To design a user friendly system that will store and retrive patient records.
- To design an information system which connects all labarotory facilities with in the hospital.
- To implement the system.
- To test and validate the system.

1.3 Contraints:

- The system is expected to be completed within 9 months.
- The system is expected to be completed within the confines of the budgeted sum of GY$6,000,000.
- The Hospital approval is required for the first version of this plan before its execution.

2. <u>Project Organization</u>

The software development team is comprised of 1 front end software engineer, 3 software engineer, a UI designer and a project manager that would be tasked with planning, budgeting, scheduling and ensuring that the software being developed is reflective of the user requirements. UI designer and 4 software developers.

Person	Unified role
Avinash Singh	Project manager, Deployment manager, Architecture and Requirements reviewer
Nicholus Sookraj	UI designer, System analyst, Architecture designer and Test manager.
Nickel Thompson	Front end Software engineer and Architecture designer.
Jaden Totaram	Back-end software engineer, Tester and technical writer.
Marion Glasgow	
Martin Das	

3. <u>Risk Analysis</u>

Risk	Likelihood of risk to occur	Risk reduction strategies
Possibilities of incorrect medical entry that can contribute to wrong treatment / fatality.	High	• Perform constant rechecks and data validation by displaying current update/change that prompts users for 'Yes' or 'No' confirmation. • Provide thorough staff training on system use
Technical difficulty in the system related to its user Interface	Low	• Perform regular system maintenance and updates for the most optimal user experience • Choose credible and experienced developers to create acceptable and fully functioning UI for information system
Unauthorized access to the system's medical records by employee/outsider(s), creating a potential security risk regardless of intruder's intent.	Moderate	• Implementation of a two-step verification process in events of unauthorized intrusion. • Perform daily security and log checks monitored by staffs, this may aid in identification of access consistency and timing to which an alert message can be sent out
Duplication of medical records with in system, which can cause confusion in the workflow.	High	• Ensure that particular constraints are implemented in the design process to prevent this from occurring. • The staff entering the records can do a quick query search to verify whether the records does / does not exist in system
System overload, where the system has met its limit in the record keeping of old and new profiles causing it to slow down and not perform efficiently.	Moderate	• In cases where the system completely stops function, ensure that there are copies of medical records synced to a cloud server. • Carry out regular checks on the system's performance to prevent overload from coming to light.

4. <u>Hardware and Software specifications</u>

6 development systems and 1 testing sytem will be needed with the following specficiations.

4.1 Required hardware:

- 3.1 GHz 64-bit processor
- 8 GB RAM(minimum)
- 250 GB SSD
- Ethernet connection (LAN) OR a wireless adapter (Wi-Fi)

4.2 Required software:

- MYSQL Server
- Python IDE
- Windows 10/11 OR
- Oracle Enterprise Linux 6 6.x release 6.5 pr higher OR
- Oracle Enterprise Linux 7

5. <u>Work Breakdown</u>

5.1 Project assessment and outlining

- Consultation with hospital administrators.
- Data Collection: list of necessary information when registering a patient (e.g., Name, address, number, etc.).
- Approval of project plan.
- System Requirements Specification.
- Setup and installation of necessary hardware & software (SQL, Python, etc.)

5.2 Design

- From data collected outline how program will look and work.
- Use of flowchart to map out the outline of how the system works.
- Create a user-friendly environment.
- Continuous consultation with staff within the hospital to ensure design meets staff needs.
- Creation of user profiles for different department (e.g.):
  - Patient
  - Admin
  - Doctor

5.3 Development/ Implementation

Upon completion and approval of the design for the system the team will move into the development aspect, here the system will enter the creation phase (coded/written/programmed). Our team will use python programming language to create the front end of the system, while MySQL and PHP will be used to design the back end.

5.4 Testing/ Evaluation

Once the system has been coded, we will deploy it to the test system for real world scenario-based testing where we will monitor the system behavior. After consultation with Hospital staff, out testing team will produce a number of scenarios to test the system against. During this stage we expect to weed out bugs and optimize/correct deficiencies as they arise for final deployment.

5.5 Maintenance/ Continuous Improvement

Upon completion of testing and the software being deployed, the system behavior will be continuously monitored and updates made as needed.

6. **Project schedule**

Task	Duration (Days)	Date Started	Date ended
Project Assessment and Outlining	20	10/11/2022	11/9/2022
Design	30	11/10/2022	12/22/2022
Development/Implementation	100	12/23/2022	5/25/2023
Testing/Evaluation	20	5/26/2023	6/23/2023
Maintenance/Continuous Improvement	11	6/26/2023	7/11/2023