Sri Lanka Institute of Information Technology

Information Technology Project

Year2, Semester 2 - 2023

Project Charter

Title of the Project:	Clinic Management System	
Campus & Batch:	Malabe- Weekday- Batch 07.01	**Group No:** T88
Development Technology:	MERN Stack	

Description of the Project:

The district general hospital located in the middle of Gampaha District is a home for thousands of patients from all over Sri Lanka. This hospital has been the only remedy for innocent people who are getting low wages and who cannot afford the comfort of a private hospital. All these people are relying on the drugs and medications which are provided free of charge by the hospital. Diabetics, Heart diseases and kidney failures are the most commonly found diseases among these people and it is a relief to say that the free clinic maintained by the district hospital is being an immense help for the people who are suffering from these diseases. But there is an unseen side of this government hospital which should be resolved.

According to Dr. Mahesh Jayasinghe, long queues for the clinics are the biggest issue that the hospital is currently facing. People are attending the clinic way before the starting time because of this problem. So, every day there is an unusual rush of people to the hospital premises because of less staff and management. Sometimes people may even tend to get into clashes and fight with each other to have an early seat. As covid-19 outbreak is still among us, it is not a good practice to behave too close to each other. Mostly the patients who generally visit the clinics are over the age of forty and in fact they are having difficulties standing in queues for lengthy periods of time considering their medical conditions. But in reality, most patients don't even have a seat to take as they are filled with patients since dawn every day. So most of them are staying in the stairways and leaning against the walls, which is pathetic scenery to watch. But we believe that, if there is a proper system for managing the appointments for the patients, all these issues can be resolved.

So, we are introducing this web-based solution for the so-called problem mentioned above. So this hospital management system will make the tasks of the hospital staff much easier. Mainly we are planning on implementing an appointment system for the patients, which we think is the best solution at the time. Through this system, all the patients will be given a unique QR code, and it will be used to track their patient profile and all the information about the patient. There are stations where doctors check the patients, and each patient is assigned to one of the stations. After meeting the doctor, patients will be given the next due date to visit the clinic. The system will also be able to manage medications for each patient individually. The administrator will be given access to generate reports and control inventories about the equipment and drug stocks of each clinic. By implementing this solution, we are hoping to provide a friendly and a healthy environment for the clinical patients in Gampaha district.

Details of the Group Members: *(Provide the details of the group leader in the first row)*

	Name with Initials	Registration Number	Contact Phone Number	Email
1.	Senarathne H.A.T. S	IT21207822	0717047594	it21207822@my.sliit.lk
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3.	Harshana W.C	IT21175466	0713758116	it21175466@my.sliit.lk
4.	Priyawansha N.G. D	IT21353284	0760190139	it21353284@my.sliit.lk
5.	Shamindi H.M.H	IT21203558	0729498280	it21203558@my.sliit.lk
6.	Nisalasara W.N.N.A	IT21209666	0769723180	it21209666@my.sliit.lk
7.	Mudalige T. N	IT21208294	0778531698	it21208294@my.sliit.lk
8.	Liyanaarachchi L.A.I.T	IT21207686	0762984374	it21207686@my.sliit.lk

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List of Functions Developed by the Group Members:

	Name with Initials	Brief Description of the Function
1.	Senarathne H.A.T.S	**Patient Management:** The functionality manages all details related to the patient. This section keeps records of personal information, treatment history, and previous and current appointments as well. There are functions to add patients, update treatment history, and remove patients from the systems after completing treatment. The system will generate a QR code for each patient according to the registration number. If they lose it, it will be replaced by a new one using their registration number. Staff members will be assigned to execute these functions. Admin will be able to generate a list of patients who are new to the system and list of patients who finished treatments as a whole.
2.	Kahawevidana H. D	**Inventory Management**: This functionality manages the details related to inventory items required for clinics. The inventory system includes records of currently available stocks, required stocks and stock purchases history. There are functions to add new stock items, remove stock items which are in unusable condition, and to replace items with new stocks. Once a certain level is reached, the system will automatically generate a message asking to order new stock. Also, officers can generate reports about available stock before and after the day's work.
3.	Harshana W.C	**Appointments Management:** This component will manage all functions related to the appointments. Patient' s QR code will be scanned by the receptionist and patient will be assigned to a station to meet the doctor. After meeting the doctor, the patient will visit the receptionist again to get the next appointment date and time. Patients will be notified about their appointment two days prior to the clinic. If he/she cannot come on that day they can just click the link in the reminder message. Then the system will get the request and send another date and time to him/her. At the end of the day, admin can generate a report on patients' attendance.

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4.	Priyawansha N.G. D	**Pharmacy System:** This component will manage all the functions related to the pharmacy. The pharmacist can add new drugs. Also, he/she can remove an ongoing drug and replace it with a new one. But the records of old drug will be kept in the system as we do not remove the physical stock of drugs. The system will automatically update available stock amounts as well. Once a certain limit is reached, the system will generate a message informing to order that respective drug and message about expired drugs as well. Pharmacists can get a report about available drugs before and after the day's work. Medications will be issued to the patients by scanning their QR codes.
5.	Shamindi H.M.H	**Laboratory Management:** The functionality manages all details related to the Laboratory. The laboratory test will be approved by the doctor for the patient. Once the patient's QR code is scanned by the laboratory officer, the system will show the recommended tests in the patient profile. Laboratory officers can insert test results to the patient profile after the test. Till then, the system will show the status of the test and it will be automatically updated. If the patient is hospitalized, the report will be removed from the system as it will be inserted into the system by the nursing officers at the ward.
6.	Nisalasara W.N.N. A	**Doctor Management:** The functionality manages all doctors. This component keeps records of doctors, their duty schedules and maintains profiles. Doctors can log into their profiles and generate reports about patients who received treatments from them. Also there are functions to add doctors, update designations, remove and keep records about the doctors after their service period at the hospital.
7.	Mudalige T. N	**Clinic Management:** There may be many clinics struggling with these issues. Also, there is the possibility of adding new clinics to the hospital in the future. The system administrator is in charge of this section. Administrators can add new clinics, delete existing ones, update clinic schedules, and generate patient reports. Clinic details will contain time, venues, and durations.

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8.	Liyanaarachchi L.A.I. T	**Staff Management:** The functionality manages all details related to the staff. This section keeps records of staff members' information. There are functions to add staff members, update staff member profiles, remove and keep service details about staff members in the system. assign clinics to the staff members. Staff members will be assigned duties according to the clinic schedules. End of the day, admin will be able to generate reports about attendance of staff members as well.