

**Programming Applications and Frameworks (IT3030)**

**3rd Year, 1st Semester**

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**Hospital Management System**

**Feedback Report**

Submitted by: **Group: S1142.1**

* IT18162974 - Lakshan P.A.D
* IT18112474 - Rodrigo M.N.D
* IT18185126 - Mallawarachchi S.N
* IT18136234 - Sathsarani B.G.K
* IT18167160 - Watthuhewa M.P

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1. Methodology

n E healthcare system will be implemented by the project. It is a hospital management system which allows three user levels in the system. Patient, doctor and hospital will be the three user levels above mentioned.

To use the currently implementing system, user must be registered to the system. Reports will be generated by the system, according the requirements of the user levels. Registered users can make appointments with the registered doctors who visit the registered hospitals. The users can even make the payments for the appointments online.

Version Control

2.Group and Work Distribution Details

|  |  |  |  |
| --- | --- | --- | --- |
| Name | IT Number | Function | Description |
| Lakshan P.A.D. | IT18162974 | Hospital | * Add schedule. * update schedule. * delete schedule. * Update profile. * Delete profile. * View the hospital details. |
| Rodrigo M.N.D | IT18112474 | Appointment | * Add the appointment details. * Edit the appointment. * Cancel appointments. * View the appointment details. |
| Watthuhewa M. P. | IT18167160 | Patient | * Add personal details * Update personal details * Delete the profile * Add appointment * View the patient details. |
| Sathsarani B.G.K | IT18136234 | Payment | * Add payment details. * Update the payment details. * Delete the payment records. * View the payment profile. |
| Mallawarachchi S.N | IT18185126 | Doctor | * Add doctor details. * Update doctor details. * Add patient   reports details**.**   * Update patient reports**.** * View the doctor details. |

3. Requirements

3.1 Stakeholder Analysis

**UI**

**DB**

**Testing**

* **Patient API**
* **Doctor API**
* **Hospital API**
* **Appointment API**
* **Payment API**
* **Patient Management**
* **Doctor**

**Management**

* **Hospital Management**
* **Appointment Management**
* **Payment Management**

4.2 Requirement Analysis

4.2.1 Functional Requirements:

* Patient Management
* Should be able to register as a new user.
* Can receive a schedule of doctors and hospitals.
* Can register an appointment and make payments online.
* Allow to edit their profile.
* Should be able to provide a feedback about the system.
* Should be able to have printouts according to the requirements.
* Doctor Management
* Should be able to register as a new user.
* Can receive a list of schedules for the required time period.
* Can receive a list of patients.
* Should be able to have printouts according to the requirements.
* Payment Management
* A registered patient should be able to make an online payment.
* User should be able to receive a bill as a printout.
* Appointment Management
* Patient should be able to schedule an appointment after registering to the system with valid username and password.
* Patient should be able to receive a schedule about appointments.
* Hospital Management
* Should be able to register as a new user.
* Can receive a list of schedules for the required time period.
* Can receive a list of patients and doctors.
* Should be able to have printouts according to the requirements.

4.2.2 Non-Functional Requirements:

* Security
* System should ensure the security of the user data.
* System should be well secured in payment section.
* Payment records should be only viewed by an authorized people.
* Usability
* System should have user friendly infer faces.
* System should have a simple navigation to complete every task.
* User should be able to use the system easily.
* Privacy
* Access control should be applied to protect the privacy of each user level.
* Reliability
* System should operate without any delay or failure.
* Efficiency
* Every user level should be able to complete their requirements without any delay.

4.2.3 Technical Requirements:

|  |  |
| --- | --- |
| Functionality | Technical Requirements |
| Patient Management | * Patient registering to the system as a new user. * After validating the account of the user, update, delete and view patient details. * Connecting with appointment class to register an appointment. * Connecting with payment to make a payment. |
| Doctor Management | * Doctor registering to the system as a new user. * After validating the account of the user, update, delete and view doctor details. * Connecting with appointment class to receive a schedule. * Connecting with hospital class to create a list of hospital with doctor IDs. * Connecting with payment class to finalize the doctor charges. |
| Hospital Management | * Hospital registering to the system as a new user. * After validating the account of the user, update, delete and view doctor details. * Connecting with hospital class to create a list of hospital with doctor IDs. * Connecting with payment class to finalize the hospital charges. |
| Appointment Management | * Patient will register an appointment after signup. * Admin will manage appointments and connect with patient, doctor and payment to complete the task of registering an appointment. * After validating the account of the user, update, delete and view doctor details |
| Payment Management | * Connect with patient, doctor, appointment, and hospital to complete calculating the total fee. * Provide payment methods to use. * After validating the admin account of the user, update, delete and view doctor details. |

4.3 Requirement Modeling

* Use Case Diagram

A picture containing text, map

Description automatically generated

5.System Design

5.1 Overall Architecture

A screenshot of a cell phone

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5.2 Database Design

A close up of a map

Description automatically generated

5.3 Workflow Diagram

6.Function Description

6.1 Hospital Management: IT18162974 (Lakshan P.A.D)

A close up of text on a white background

Description automatically generated

6.2 Patient Management

Only the registered patients are able to interact with the system using their username and password. Hence if a user is not registered, he should be able to fill the registration form. Each registered patient has a user profile which includes all the personal information to which he can enter more details. The registered user should be able to make appointments, entering the relevant details and also if it is being submitted, he is responsible to make the relevant appointment charges whereas has the ability to cancel the appointment before making the payment.

A close up of a map

Description automatically generated

6.3 Doctor Management

A close up of a logo

Description automatically generatedIn health people system user has to first login into the system. If she/he hasn’t registered yet first they have to register to the system giving the details (Name, specialized, NIC, registered number, etc.….). After the user login. User can see the appointment and check the patient details. After checking the patient doctor can enter the prescription to the system when the patient visit on other time doctor can update the report of the patient after checking the patient. Then doctor get the promotions and specialized from another side doctor can update the she/he is profile. When the doctor resign admin can delete, she/he is profile.

6.4 Payment Management

In this system user first login to the system. Without login, user can't make an appointment. After successful login, user must make an appointment according to availability of doctors. After that system will display payment page. Then user have to fill visa or master card details (card type, card no, card expiry date and card cvc number) according to the payment process. Finally, user can make payment successfully after providing valid information to the system.

A close up of a map

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6.5 Appointment Management

Appointment function will be used by the user level patient and will send data to the user level doctor. The user should have a valid account to use this function. Once the user entered relevant details to the appointment interface, system will send the data to the central database. Then the system will display a list of scheduled appointments for the required time period. Patient can choose a hospital and a doctor and submit the details. System will generate an invoice with relevant charges. Patient has to pay and receive a notice to confirm the appointment. Confirmation notice will be provided as a report that is generated from the system.

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6. Gantt Chart

7. References

8. Appendix

* As an integration tool, we used git hub.

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* Git hub repository link:

[https://github.com/PAF-00/S1142.1](https://github.com/NipunikaRodrigo/PAF-00/S1142.1)