**CHAPTER 1: THE PROBLEM AND ITS BACKGROUND**

**1.1 BACKGROUND OF THE STUDY**

The Medical Clinic of the Polytechnic University of the Philippines provides health care services for its students, faculty, administrators, and dependents.

As of now, the medical clinic uses Microsoft Excel as their primary data repository and Microsoft Word to produce forms and reports related to patient monitoring and collection and medical supply inventory. In connection with this, they always have difficulties in executing these processes because the application is inefficient for database purposes and unreliable when it comes to data security.

In this regard, our group chose to make Medical Clinic Patient Logs and Inventory System to help the clinic to have more ease in handling medical files. With this, they can easily manage inventory and patient logs on the computer. The system is composed of different modules: Inventory Item Module, Item Distribution Module, Item Library Module, Patient Module, and Report Module.

**1.2 CONCEPTUAL FRAMEWORK**

**MAINTENANCE MODULE**

The user is free to choose from the following sub modules

a. Items (Medicine, Supply, Equipment)

b. Patient (Student, Faculty, Admin)

c. Supplier

d. Manufacturer

e. Branches

f. Colleges and Courses

g. Department

Code, type, generic name, dosage, form, manufacturer, minimum level and maximum level of added items are displayed in a list

SYSTEM MODULE

a. The system saves the added/edited items.

Code, first name, middle name, last name, course, year, section, gender and birthday of added patients are displayed in a list

SYSTEM MODULE

b. The system saves the added/edited patient.

SYSTEM MODULE

c. The system saves the added/edited supplier.

Code, supplier’s name, address, e-mail, and contact number of the supplier of added patient will be displayed in a list.

X

Code, manufacturer’s name, type and address of added manufacturer will be displayed.

SYSTEM MODULE

d. The system saves the added/edited manufacturer.

X

Code, branch name and address of added branches will be displayed.

SYSTEM MODULE

e. The system saves the added/edited branches.

Code, College name and acronym of the added colleges and courses will be displayed.

SYSTEM MODULE

f. The system saves the added/edited Colleges and Courses.

SYSTEM MODULE

g. The system saves the added/edited departments.

Code, branch name of the added departments will be displayed.

**ITEM INVENTORY MODULE**

- The user can filter list by using search box and the advanced options

Results are shown. Code name, item name, quantity, consumed and balance is displayed.

SYSTEM MODULE

-The system is filtering the list from the given options.

**ITEM DISTRIBUTION MODULE**

SYSTEM MODULE

-The system will filter the list from the given options.

a. The user can input values in the search box.

- List of distributed items is shown. Distribution code, branch, type, code, item name qty. and date is displayed

SELECTION OF ITEMS TO BE DISTRIBUTED

b. User will choose from item type, item name, and date. He can input quantity no greater than the available.

SYSTEM MODULE

-The system distributes the items to the assigned location.

**RECEIVE INVENTORY MODULE**

SYSTEM MODULE

a. The system will filter the list from the given options.

a. The user can input values in the search box.

- List will be shown with labels: receiving, code, quantity, expiration date, supplier and date received.

b. The user can enter and save receiving information: the code, delivery receipt number, date received and supplier.

SYSTEM MODULE

b. The system will filter the list from the given options.

**PATIENT LOGS MODULE**

SYSTEM MODULE

a. The system will filter the list from the given options.

The user can choose what to do:

a. search from the search box

b. Adding of patient logs

-Results will be shown. Date, time in, patient’s name, department and complaints will be displayed

SYSTEM MODULE

b. The system displays the add patient logs form allowing the user to add patient logs

**REPORTS MODULE**

SYSTEM MODULE

a. System displays Stock Card Form

SYSTEM MODULE

b. System displays Daily Treatment Record Form

a. Stock Card

b. Daily Treatment Record

c. Receive Inventory

d. Item Distribution

e. List of Items

- List of reports is displayed

SYSTEM MODULE

c. System displays Receive Inventory

SYSTEM MODULE

d. System displays Item Distribution

SYSTEM MODULE

e. System displays Item Distribution

**NOTIFICATIONS MODULE**

- Displays the item name and description of the notification

SYSTEM MODULE

- The system finds expired medicines and items reaching minimum count and below

Notification Form

**1.3 STATEMENT OF THE PROBLEM**

The main problem that this research wants to solve is the time consuming and complicated way of keeping track of the medical clinic’s inventory. Specifically, the problems include;

1.) Difficulty in retrieval of the medical records.

The reports are kept on a single PC located at the medical clinic and is saved on the “My Documents” folder. Due to this fact, every time they have to check a specific medicine or equipment’s

2.) Security of medical supply inventory is at risk

Reports are saved on an excel file without any password, which could be easily be modified by anyone who can access the PC.

3.) Making of reports is time consuming

In making the report they have to go through all the documents in the PC and also through the records that are on paper, which will take up a lot of time.

**1.4 OBJECTIVES OF THE STUDY**

The general objective of the study is to create logs and inventory system for the Polytechnic University of the Philippines’ medical clinic. The logs and inventory system is made to help the university keep track of their inventory. Specifically, this study aims to accomplish the following objectives;

1.) To help the users to have ease in retrieval of medical records.

2.) To provide security on clinic’s data

3.) To give them convenience in making reports

**1.5 SIGNIFICANCE OF THE STUDY**

The study intends to provide an accurate and effective logs and Inventory System which will benefit the following

**To the Clinic Director.** The development of better data manipulation, retrieval, and data storage through computer based systems can make the director’s job much easier.

**To the Clinic.** The proposed system will lessen the time, enhance the level of work, help its processes more reliable and efficient, and provide accuracy and security of data and information.

**To Patients**. The project will make a patients admission faster. When a patient is already registered in the system, they no longer need to fill up the forms.

**To inventory personnel.** The handling and monitoring of records regarding the inventory of medicines will become easier.

**To Future Researchers.** The project serves as a basis of their study. It engages their knowledge in programming activities to create a computerized system. It will also serve as a tool to sharpen their knowledge and ability in developing a computerized system.

**1.6 SCOPE AND DELIMITATION**

The system focuses on the inventory of items in the medical clinic including medicines, equipment and supplies. Records of patients are also included for the sake of monitoring given/consumed medicine and its balance.

The system consists of 7 main modules which are Maintenance, Item Inventory, Item Distribution, Receive Inventory, Patient Logs (DTR), Reports and Notifications. Maintenance has sub modules: Items, Patient, Supplier, Manufacturer, Branches, College and Courses, and Departments. Item Inventory is where the number of medicines, supplies and equipment are monitored. Item Distribution is where the user can view and add the items that are to be distributed to other campuses. Receive Inventory is a module where the user can monitor received items. It will provide information such as receiving code, delivery receipt number, date received and the supplier. Patient Logs is where the registration of patients occurs. Stock card, daily treatment record, receive inventory, item distribution and list of items are held under Reports Module. Notifications contain the list of warnings when number of items reached the minimum value and when a medicine is expired.

Records and reports of the dental clinic are not included in our system. The system is limited for the Medical Clinic of the Polytechnic University of the Philippines in Sta. Mesa, Manila branch.

**1.7 Definition of Terms**

**Admin** - one who administers especially business, school, or governmental affairs.

**Branches** - location other than the main school, where schooling is conducted.

**Equipment** – items that are designed to aid in the diagnosis, monitoring or treatment of medical conditions.

**Faculty** - teaching staff of a university or college, or of one of its departments or divisions

**Inventory** - a complete list of items such as property, goods in stock, or the contents of a building.

**Logs** - make a systematic recording of events, observations, or measurements

**Maintenance** - the process of maintaining or preserving someone or something, or the state of being maintained.

**Manufacturer** - a person or company that makes goods for sale.

**Medicine** - a compound or preparation used for the treatment or prevention of disease, especially a drug or drugs taken by mouth.

**Notifications** - the action of notifying someone or something.

**Patient** - a person receiving or registered to receive medical treatment.

**Student** - one who regularly attends an educational institution of secondary or higher level.

**Supplier** - is a person or entity that is the source for goods or services.

**Supply** - a stock of a resource from which a person or place can be provided with the necessary amount of that resource.

**Treatment** - medical care given to a patient for an illness or injury.