**ASHESI UNIVERSITY COLLEGE**

**SAFE (SMART HOSPITAL MANAGEMENT SYSTEM)**

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Preliminary Draft of Chapter 1

**APPLIED PROJECT**

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# Chapter 1: Introduction

## 1.1 Introduction and Background

This project is aimed at developing a software for hospitals and pharmacies in Ghana to help minimize self-medication and also to assist health personnel in keeping accurate records of patients. Most hospitals in Ghana do not have proper record keeping systems in place that is to record patient’s details (including name, age, disease, prescriptions etc.) and manage them properly. Also, patients do not get a formal report after visiting hospitals. Moreover, this software will not only allow health personnel to enter details of patients but also the hospital management will be able to use the software to generate statistical reports and also to process health insurance claims.

## 1.2 Problem Statement

Currently, most of the health services in Ghana do not have better record keeping of their patients. These hospitals store patient information of pieces of paper and stored in folders which is also made of paper. In a scenario where there is a fire outbreak or water spillage in the hospitals, all the necessary documents of patients could be lost. This is a crucial problem because if the health of a patient is not tracked properly it could lead to more complications or even the patient losing his/her life. Also the time it takes for a nurse to search for the folder of a particular patient is unbearable especially when the patient has misplaced his/her card. A patient experiencing a severe headache and it takes the nurses approximately 30minutes to search for that particular patient’s folder before seeing the doctor. Furthermore, the processing of insurance health claims is slower when the health personnel submit the claims in a paper format. The software will eradicate the old ways of storing patient information, generate statistical reports and help health personnel to send health insurance claims.

## 1.3 Motivation

The urgent concern discovered in most hospital is the time that patients wait for their files to be found before they get to see a doctor. It gets more difficult in cases where the patient has lost his hospital card or does not remember the last time he visited that hospital. This could be a difficult job for the nurses whom are to search for a particular file amongst thousands of other files. In certain cases, the file of a patient could not be found or if found could be badly damaged. The time it takes a nurse to search for a particular patient’s file could be reduced drastically when proper record keeping systems are put in place.

Normally when a patient goes to a hospital, after waiting minutes or even hours for his files to be found, the doctors write drug prescriptions on a piece of paper for patients to buy them from a pharmacy. There could be a scenario where the pharmacist mistakenly gives a patient the wrong drug or dose due to the poor visibility of the doctor’s handwriting. However, the software will enable doctors send prescriptions of patients to pharmacists at ease. Also the details of patients will be stored using the software in a secured database. A database will serve as the folder for keeping records of patients who visit the hospital. It will also be highly effective in searching for a patient’s health information because it is faster when searching from a database.

Moreover, the availability of the management software will help the hospital management keep proper records of important data. The management will be able to generate statistical reports (including number of patients that visited the hospital in a month, the number of malaria cases treated within a week etc.) which will in the long run help to minimize certain diseases or improve the services of the hospitals.

* 1. Objectives
* To allow effective record keeping systems and structures for most hospitals in Ghana.
* To establish a better connection between hospitals and pharmacies in Ghana to provide patients with the best of services.
* To provide statistical report for hospital management to effectively manage the daily activities in hospitals
* To allow health personnel submit an electronic health insurance claim with ease.
* To reduce the time it takes a nurse to search for a patient’s file or update the details of a patient.
  1. Research

A research conducted showed that most hospitals in Ghana encounter the problem of bad record keeping of patients’ information. Through the research, several applications were discovered which were purposely developed to tackle these persisting challenges. The few hospitals that used software in managing patient information were mostly open-sourced software. Some of these software were developed by foreign developers hence does not meet the demand of the hospitals in Ghana.

Some of the existing software found had complicated user interface that made users confused as to what to do next. The installation process of some of the software was hectic because it demanded other requirement before it can be up and running. Also, the computers in some of the hospitals were not powerful enough to support some of the software because few demanded more memory to be able to work efficiently.

After the research, it was concluded that most of the applications were developed without considering the platform or computer it will be operated on or the users of the software. The results and observations derived of the research prove the necessity of this project.