Premier University

# Department of Computer Science & Engineering



**Final Year Project Report**

**On**

**Vaccine Center**

# Submitted by

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***In partial fulfillment of the degree of***

Bachelor of Science in Computer Science & Engineering

# Under the Guidance of

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**Declaration**

In partial fulfillment of the requirements for the degree of Bachelor of Science, the project report is submitted to Department of Computer Science and Engineering, Premier University. I hereby declare that the work provided in this paper was completed under the supervision of Mr. Anik Sen, Assistant Professor, Department of Computer Science & Engineering, Premier University and that materials from other researchers' work are mentioned as references. This project report has never been submitted before, in whole or in part, for any degree.

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## CERTIFICATE OF APPROVAL

This project title “Vaccine Center” submitted by Antar Nandi (ID: 1603110201203) has been accepted as satisfactory in fulfillment of the requirement for the degree of Bachelor of Science in Computer Science & Engineering (CSE) as B.Sc. Engineering to be awarded by Premier University, Chittagong.

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**ABSTRACT**

“Vaccine Center” is a system that helps users to get vaccine. Admin of this system can add vendor and purchase vaccines from them. Admin can add patient with specific vaccine and patient’s information. He/she can generate report for patients. Automated reminders are sent by “Vaccine Center” so that patients can update about their vaccination date. Filtering by different parameters might also help admin quickly find the information admin looking for. Admin also can generate report for purchase, sales and stock. Therefore, i have built an interactive and effective website called “Vaccine Center”. ​

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# Introduction

**Chapter 1 Introduction**

A vaccine is a biological preparation that provides active acquired immunity to a particular infectious disease. A vaccine typically contains an agent that resembles a disease-causing microorganism and is often made from weakened or killed forms of the microbe, its toxins, or one of its surface proteins. The project “Vaccine Center” is a system that helps users to get vaccine. It helps Admin of this system to keep all the information about vaccines and patients. Admin of this system can add vendor and purchases vaccine from them. Users can get vaccine from this system and automated reminders are sent by “Vaccine Center” so that users can get update about their upcoming vaccination date. Admin of this system keep track of stored and sold vaccines. He can also see total sold vaccines and revenue from this system. Admin can generate report of stock, sales, purchase, patients list, vaccines list and pharmaceutical list using this system.

**Objectives**

* To add pharmaceuticals.
* To add vaccines and purchase from pharmaceuticals.
* To add one or multiple vaccines for a patient and patient information.
* To see a list of upcoming patients vaccination,vaccinated patients.
* To generate report for each feature.
* To manage report for sales, stock and purchase.
* To send notification for upcoming vaccination.

# Motivation

There are many vaccination center and they maintain their vaccines information and other details using hand written documents. But the main motive is to build this application “Vaccine Center” which will give the facilities to keep track of all information of vaccines and patients through database system.

# Summary

“Vaccine Center” is a system from where anyone can take vaccines and get notification for upcoming vaccination date. Admin of this system can also keep all information of users. Admin also can manage stock of vaccines. He can see also statistics of profit and loss of this system. He can filter data of this system and can generate report for each panel.

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# Chapter 2 LITERATURE REVIEW

* 1. **Introduction**

A literature review is an overview of the previously published works on a specific topic. The term can refer to a full scholarly paper or a section of a scholarly work such as a book, or an article. The fundamental goal of writing a literature review is to convey to the reader the type of knowledge and thoughts that have been established on a topic, as well as the strengths and flaws.

# Review of existing systems

There are some Vaccination centers that are integrated with different medical system. These are –

# Evercare Hospital Limited

Evercare hospital vaccination system help user to get necessary information about different kind of vaccines stop paying for things you no longer need. Doses and price of those vaccines are given so that an user can get details about the vaccines. [1]

# United Hospital Limited

The Vaccination Center of United Hospital is providing its keen continues services. This department serves the indoor neonates, children & Adult by providing life savings vaccines. This department plays a vital role to improve the health status of community. This department maintains the excellent cold Chain for Vaccine Storage. [2]

# Comparison of my system

The main objective of this project is to use this system only for vaccination purpose. Admin of this system can keep detailed information of vaccines and patients. Admin can manage the stocks of vaccines.

# Necessity of Methodology

The ultimate objective of software engineering is to produce good quality maintainable software within reasonable time frame and at an affordable cost. This is achievable only if we have matured processes to produce it. For a mature process, it should be possible to determine in advance how much time and effort would be required to produce the final product.

Methodologies aim to place a degree of control over a software project, enabling it to be steered toward a successful conclusion through a proven series of steps and actions. It also allows for rapid delivery of high-quality software, and is a business approach that aligns development with both customer needs and company goals.

# Software Development Life Cycle (SDLC)

Software Development Life Cycle (SDLC) is a process used by the software industry to design, develop and test high quality software. The SDLC aims to produce a high quality software that meets or exceeds customer expectations, reaches completion within times and cost estimates.



## Figure 2.1. Software development life cycle.

SDLC is a process followed for a software project, within a software organization. It consists of a detailed plan describing how to develop, maintain, replace and alter or enhance specific software. The life cycle defines a methodology for improving the quality of software and the overall development process.

* + 1. **Feasibility Study**

A feasibility analysis or feasibility report is a way to evaluate whether or not a software project plan could be successful.

# Requirement Gathering and analysis

The requirement collecting and analysis phase of the SDLC is the most significant since it is here that the project team begins to comprehend what the customer wants from the project. The project team meets with the customer during the requirements gathering sessions to go over each requirement in depth.

# System specification

A System Needs Specification (SRD) is a process of Gather, analyze, and validate the information. It define the requirements and prototypes for new system. System specification evaluates the alternatives and prioritize the requirements. It examine the information needs of end-user and enhances the system goal. Software Requirement Specification (SRS) document, which specifies the software, hardware, functional, and network requirements of the system is prepared at the end of this phase.

# System Design

System Design Includes the design of application, network, databases, user interfaces, and system interfaces. It Transforms the SRS document into logical structure, which contains detailed and complete set of specifications that can be implemented in a programming language. It reviews the proposed design. Ensure that the final design must meet the requirements stated in SRS document.

# Program Design and Coding

Once the system design phase is over, the next phase is coding. In this phase, developers start building the entire system by writing code using the chosen programming language. In the coding phase, tasks are divided into units or modules and assigned to the various developers. It is the longest phase of the Software Development Life Cycle process.

# Testing

Once the software is complete, and it is deployed in the testing environment. The testing team starts testing the functionality of the entire system. This is done to verify that the entire application works according to the customer requirement. During this phase, QA and testing team may find some bugs/defects which they communicate to developers. The development team fix the bugs and send back to QA for a re-test. This process continues until the software is bug-free, stable, and working according to the business needs of that system. There are two ways to implement my proposed system:

* + - * White Box Testing
      * Black Box Testing

# Software Process Model

A graphical representation of an object is provided by a software process model. It depicts a software system's activity. There are four manifesto principles for Agile Model. They are -

* **Individuals and interactions:** I have worked in my project individually. Individuals and interactions are valued in the Agile methodology.
* **Working software:** I built my method step by step to understand public demand and tested it with our supervisor. Because a working demo is the most effective approach to develop.
* **Customer collaboration:** My project is totally focused on my clients' requirements. Without consumer interaction, I won't be able to meet public demand and necessity. As a result, maintaining a steady client connection is the most important thing.
* **Responding to change:** Using the agile paradigm, i can create them quickly and continue to develop this system.

**Advantages of Agile Model:**

* Customer satisfaction is achieved by the constant distribution of software.
* Customer, testers, and developers communicate on a regular basis.
* During the development phase, requirements can be updated.

# Summary

The existing systems and the Software Development Life Cycle are discussed in this chapter (SDLC)

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# References

[1] https://www.evercarebd.com/vaccination-centre [Accessed on: 30 April, 2022].

[2] https://www.uhlbd.com/services/vaccination [Accessed on: 30 April, 2022].