A Project Report

On

A HOSPITAL

Submitted in Partial Fulfillment of the Requirement of Project I (BIT178CO)

Of

Bachelor of Information Technology

**Submitted To:**



Purbanchal University

Biratnagar, Nepal

**Submitted By:**

Anjit Pariyar(310520)

Anubhav Khadka(310521)

Chanda Shrestha(310597)

**KANTIPUR CITY COLLEGE**

Putalisadak, Kathmandu

April 28, 2018

A Project Report

On

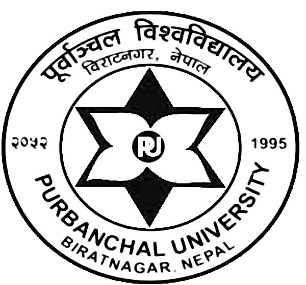
A HOSPITAL

Submitted in Partial Fulfillment of the Requirement of Project –I (BIT178C0)

Of

Bachelor of Information Technology

**Submitted To:**



Purbanchal University

Biratnagar, Nepal

**Submitted By:**

Anjit Pariyar(310520)

Anubhav Khadka(310521)

Chanda Shrestha(310597)

**Project Supervisor**

Deepak Poudel

**KANTIPUR CITY COLLEGE**

Putalisadak, Kathmandu

April 28, 2018

**Topic Approval Sheet**

It is hereby informed that the selected by Anjit Pariyar, Anubhav Khadka and Chanda Shrestha of BIT I semester for their semester project has been found suitable and as per the credit assigned by Purbanchal University (PU), Biratnagar, Nepal.

The project Committee has approved the following topic for the above-mentioned students.

Topic Approved: A Hospital

**Certificate from Supervisor**

This is to certify that the project entitled “A Hospital” submitted by Anjit Pariyar, Anubhav Khadka and Chanda Shrestha to the department of Information Technology, School of Science and Technology at Kantipur City Collage, Kathmandu, Nepal towards the requirement for BIT178CO of is an original work carried out by them under my supervision and guidance.

Signature:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Deepak Poudel

Department of Information Technology

: (Project Supervisor)

Kantipur City College, Putalisadak Kathmandu

Date: 2019

# ACKNOWLEGMENT

We express our profound gratitude and indebtedness to our project guide Mr. Deepak Poudel (project supervisor, KCC), who directed us from time to time with valuable guidence, constant encouragement and suggestions throughout the project. Without the help of our guide this project would never been realized.

We would like to express our sincere thanks to Mr.Saroj Pandey (coordinator, BIT), for giving us this opportunity to undertake this project. We would also like to thank Mr.Raju Kattel (Head of Department name with full designation) for whole hearted support. We are also grateful to our teachers for their constant support and guidance.

**Group Member**

Anjit Pariyar

Anubhav Khadka

Chanda Shrestha

## **ABSTRACT**

The report describe the services of hospital. . It mainly focuses on taking appointment, cancel appointment, changing information and delete information of patients as well as adding new patient's details, doctor's record, searching, updating. This project manages the doctor's & patient's details within the hospital in a systematic manner. This program helps to manage the records of doctor's & patient's systematically for future reference and decrease the complexity of recording as it is user friendly.

.

TABLE OF CONTENT

Contents

[ACKNOWLEGMENT i](#_Toc9519258)

[ABSTRACT ii](#_Toc9519259)

[List of figure iv](#_Toc9519260)

[CHAPTER 1: INRODUCTION 1](#_Toc9519261)

[1 .1 Background 1](#_Toc9519262)

[1.2ProjectIntroduction 1](#_Toc9519263)

[1.3 Objectives of the Project 1](#_Toc9519264)

[1.4 Project Features 2](#_Toc9519265)

[1.5 Organization of project 2](#_Toc9519266)

[CHAPTER 2: PROJECT SPECIFICATION 3](#_Toc9519267)

[2.1 FUNCTIONAL REQURIMENT 3](#_Toc9519268)

[2.1.1 Administration module: 3](#_Toc9519269)

[2.1.2 Doctors module: 3](#_Toc9519270)

[2.1.3 Patient Module: 4](#_Toc9519271)

[2.2 TEAM STRUCTURE AND ROLE 4](#_Toc9519272)

2.3 [Implementation 4](#_Toc9519273)

[2.3.1 Library function 4](#_Toc9519274)

[2.3.2 User defined function 6](#_Toc9519275)

[2.4 Gantt chart 9](#_Toc9519276)

[CHAPTER 3: SOFTWARE DESIGN AND DEVELOPMENT 9](#_Toc9519277)

[3.1TOOLS AND TECHNOLOGY 10](#_Toc9519278)

[3.2 ALGORITHM 10](#_Toc9519279)

[3.3 FLOWCART 16](#_Toc9519280)

[CHAPTER 4: TESTING 21](#_Toc9519281)

[4.1 Introduction 21](#_Toc9519282)

[CHAPTER 5: CONCULSION 23](#_Toc9519283)

[**REFERENCE** 26](#_Toc9519284)

### List of figure

|  |  |  |
| --- | --- | --- |
| **S.N** | **Name of figures** | **Reflection(page no)** |
| 1. | Flow chart | 16-20 |
| 2. | Gantt Chart | 9 |

# 

#### List of Tables

|  |  |  |
| --- | --- | --- |
| **Table No.** | **Table Name** | **Reflection (page no.)** |
| 1. | Organization of Project | 2 |
| 2. | Team Structure | 4 |
| 3. | Library Functions | 4-5 |
| 4. | User Defined Functions | 5-8 |
| 5. | Testing | 21-22 |

# **CHAPTER 1: INRODUCTION**

## **1 .1 Background**

**The concept of this project came in our mind when group member visited to the hospital, lagankhel polyclinic. The working system is not well managed and the process were slow. For the proper management of hospital we have decided to build a project which would keep the proper record of patient’s, doctors, report and hospital in a systematic way within the short time period.**

## **1.2 Project Introduction**

**The name of our project is “A HOSPITAL”. The main concept of this project is take appointment, cancel appointment and changed the information of patient’s that has been store by admin. Its also contains many other elements like information of appointed doctors, information about doctors and report of patient’s in a systematic way. And we can easily check our reports that has been store and updated by admin.**

## **1.3 Objectives of the Project**

* To provide information of the hospital, doctor and its service
* To make Easy for the appointment
* **Easy to view the report**

## **1.4 Project Features**

* **Doctor appointment**

1. Take appointment
2. Cancel appointment

* Store patients' information

1. Modify patient’s information
2. Delete patient’s information

* **Allows to add doctor’s information**
* **1.Search specific doctors**
* **Login system**
* Provides facility for viewing doctors' information

## **1.5 Organization of project**

|  |  |
| --- | --- |
| **Chapters** | **Heading** |
| Chapter 1 | Introduction |
| Chapter 2 | Project Specification |
| Chapter 3 | Software design and development |
| Chapter 4 | Testing |
| Chapter 5 | Conclusion |

# 

# **CHAPTER 2: PROJECT SPECIFICATION**

## **FUNCTIONAL REQURIMENT**

In Software engineering and systems engineering, functional requirements defines a function of a system or its component. A function is described as a set of inputs, the behavior, and outputs. It describes how the project is implemented. Followings are the major functional requirements of the project.

### 2.1.1 Administration module:

This module enables the user to insert, update, view, search and delete the patient's, doctor's information.

### 2.1.2 Doctors module:

It includes the information related information to the doctor as mentioned below:

**Attribute of Doctor:**  Name, Department, NMC number, Available time

### 2.1.3 Patient Module:

It includes the information related to the patient as mentioned below:

**Data Members**: Name, Patient ID, Recommended medicine, Doctors name, Department code.

## **TEAM STRUCTURE AND ROLE**

|  |  |  |
| --- | --- | --- |
| **Members Name** | **Symbol Number** | **Task Performed** |
| Anjit Pariyar | 310520 | Coding and Documentation |
| Anubhav Khadka | 310521 | Coding and Documentation |
| Chanda Shrestha | 310597 | Coding and Documentation |

## **2.3 Implementation**

This section includes library function and user defined function used in the program along with their description.

## **2.3.1 Library function**

The library functions that have been included in the project are listed below:

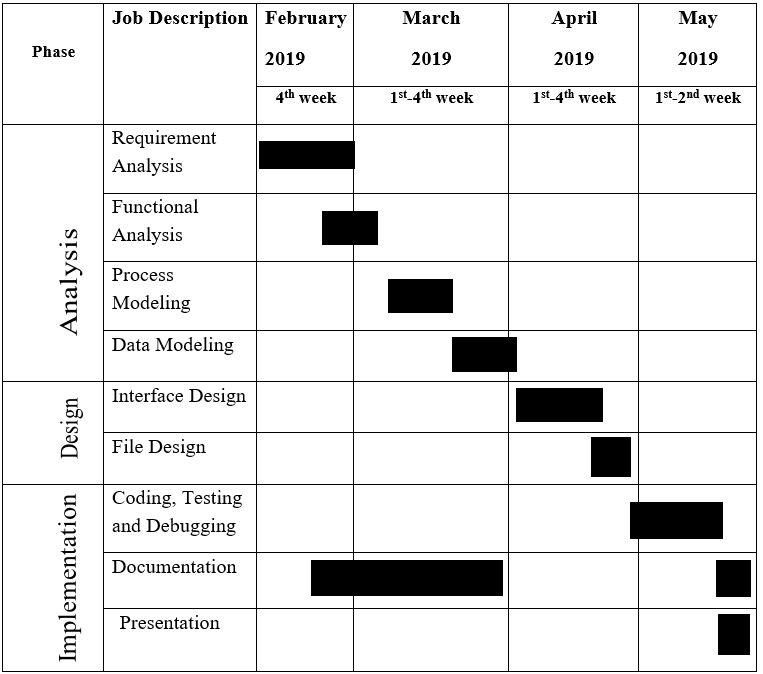
|  |  |
| --- | --- |
| **Name of library function** | **Description** |
| stdio.h() | This is standard input/output header file in which Input/Output functions are declared like printf, scanf |
| conio.h() | This is console input/output header file which performs console input output and includes built in function |
| String.h() | All string related functions are defined in this header file which defines one variable type & various functions for manipulating array of characters & is also used for string operations. |
| Time.h() | This header file contains time and clock related functions. Date and time operations are defined in this header file. |
| Windows.h() | It declaration for the function of windows API |

### 2.3.2 User defined function

|  |  |
| --- | --- |
| **Name of user defined function** | **Description** |
| 1.void menu() | To display main menu |
| 2.void department() | To display the departments |
| 3.void doctor() | To display the list of doctors |
| 4.void selection() | To select the options( take appointment, cancel appointment, change info) |
| 5.void seldepartment() | To select the respective department |
| 6.void neurodoct() | To display the information of doctors who worked in neuro department |
| 7.void cardiodoctor() | To display the information of doctors who worked in cardio department |
| 8.void pulmodoc () | To display the information of doctors who worked in pulmonology department |
| 9.void obstdoct() | To display the information of doctors who worked in obstericies department |
| 10.void entdoctor() |  |
| 11.void eyedoct() | To display the information of doctors who worked in eye,nose and throat department |
| 12.void dentaldoct() | To display the information of doctors who worked in dental department |
| 13.void dermdoct() | To display the information of doctors who worked in dermatologist department |
| 14.void anishtime() | To display the available time of dr.Anish |
| 15.void pankagtime() | **To display the available time of dr.pankag** |
| 16.void rajendratime() | To display the available time of dr.rajendra |
| 17.void nagmatime() | To display the available time of dr.nagma |
| 18.void arpantime() | To display the available time of dr.arpan |
| 19.void kumkumtime() | To display the available time of dr.kumkum |
| 20.void anchaltime() | To display the available time of dr.anchal |
| 21.void dependratime() | To display the available time of dr.dependra |
| 22.void reskytime() | To display the available time of dr.resky |
| 23.void neyaztime() | To display the available time of dr.neyaz |
| 24.void anupamatime() | To display the availale time of dr.anupama |
| 25.void khagendratime() | To display the available time of dr.khagendra |
| 26.void shirapatime() | To display the available time of dr.shirapa |
| 27.void confirmapoint() | To display id and code of patient |
| 28.void appointurl() | To fill the appointment form |
| 29.void takeappointment() | To take appointment |
| 30.void cancelappointment() | To cancel appointment |
| 31.void head() | To display taken appointment |
| 32.void body() | To display taken appointment |
| 33.void foot() | To display taken appointment |
| 34.void filechoice() | To choice the option for(adding patient information, viewing patient information, cancel appointment etc) |
| 35.void appendrecord() | To write information of patient |
| 36.void updaterecord() | To update the record of patient |
| 37.void deleterecord() | To delete the record of patients |
| 38.void searchrecord() | To search record of patient |
| 39.void readrecord() | To read the record of department |
| 40. char\*doctorid() | For department code and patient ID |
| 41.char\*doctorpass | For departmental password of admin |

## **2.4** **Gantt chart**

Gantt chart refers to a chart in which a series of horizontal line shows the amount of work done or production completed in certain periods of time in relation the amount of planned for those periods. The work break down and time (in weeks) required to complete the specific task, are shown as in the Gantt chart.



# CHAPTER 3: SOFTWARE DESIGN AND DEVELOPMENT

## **3.1TOOLS AND TECHNOLOGY**

It has been created using the code block compiler.

## **3.2 ALGORITHM**

Step1: Start

Step 2: Display menu

Choice1: Emergency

Choice 2: Doctor appointment

Choice3: Appointed doctors

Choice 4: Our doctor

Choice5: Our department

Choice 6: Doctor login

Choice 7: Your report

Choice 8: Exit

Default: Go to step 2

Choice 1:

Step 1: Display department option

Choice 1: Select department

Choice2: Back go to step2

Default: go to step 2 choice 1 step 1

Choice1:

Step1: Output you have been appointed please wait a second

Step2: go to step 2

Choice2:

Step1: Option for appointment

Choice1: Take appointment

Choice 2: Cancel appointment

Choice 3: Change information

Choice 4: back

Default: Go to step 2 choice 2 step 1

Choice1:

Step1: Display department

Step2: display doctor list

Step3: display available time

Step4: form

Step5: go to step2

Choice2:

Step1: enter id and code

Step2: if id=patientsid and code = patients code

Form

Output your information changed successfully wait a sec

go to step2

choice 3:

step 1: enter id and code:

step2: if id=patientsid and code = patientscode

form

output your appoint had cancel successfully

output wait a sec

goto step 2

Choic4:

Step1: Output doctor information

Default: Go to step1

Choice5:

Step1: Output department

Default: Go to step 1

Choice 6:

Step1: Input ID

Step2: Input password

Step3:

If (ID=department ID and password=department password)

Go to step5

Else

Go to step2

Step 5: Output doctor function

Choice1: Add patient information

Choice2: Change patient information

Choice3: Delete patient details

Choice4: view patient details

Default: Go to step2

Step1:

Choice1: Input patient ID, Name, DOB, disease, recommended medicine, department code, doctor name and date

Step2: Save to file

Step 3: goto step2 choice 6 step5

Choice2:

Step 1: Input patient ID

Step2: Input new patient Name, Age, recommended medicine, disease ,doctor name and date

Step3: Save file

Step4: Go to step5

Choice 3:

Step1: Input patient ID

Step2: Delete patient details

Step3: Go to step4

Choice7:

Step1: Output your report

Step2: Input ID

Step3:

If (ID=patient ID)

Output doctorname, date , patients name, patients id, medicine ,remark

Go to step2

Else

Output ID is wrong

Goto step2

Step4:

Output disease, patient ID, medicine and doctor

Else

Output no recorded yet

Step5: go to step2

Choice8:

Step1: output exit

Step2: Input ID and password

Step3:

If (ID=administrator ID and password)

exit

Else

Go to step2

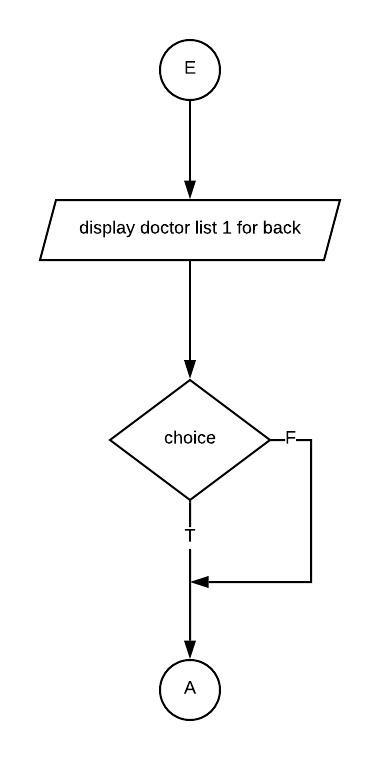
Step4: Stop

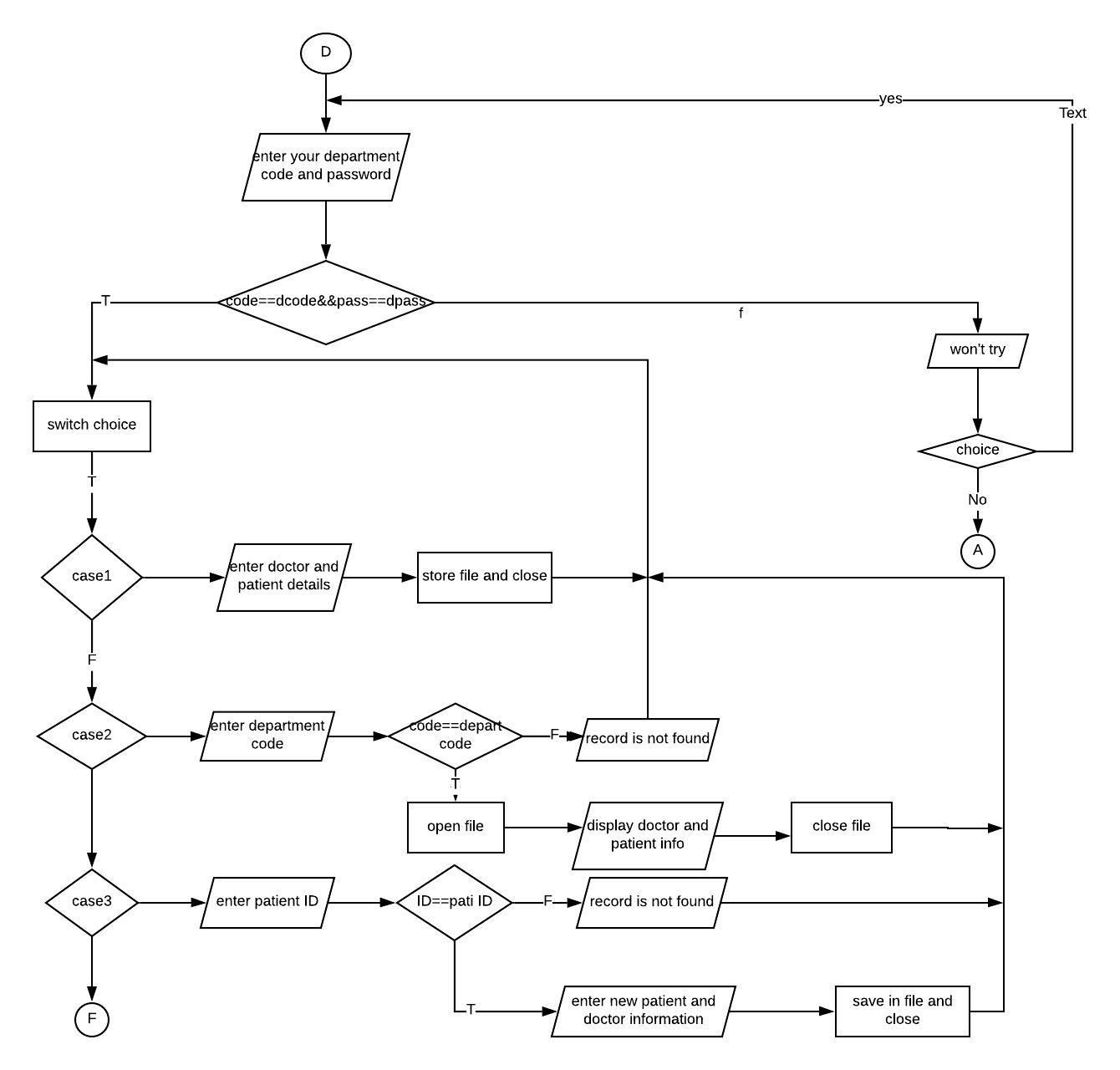
## 

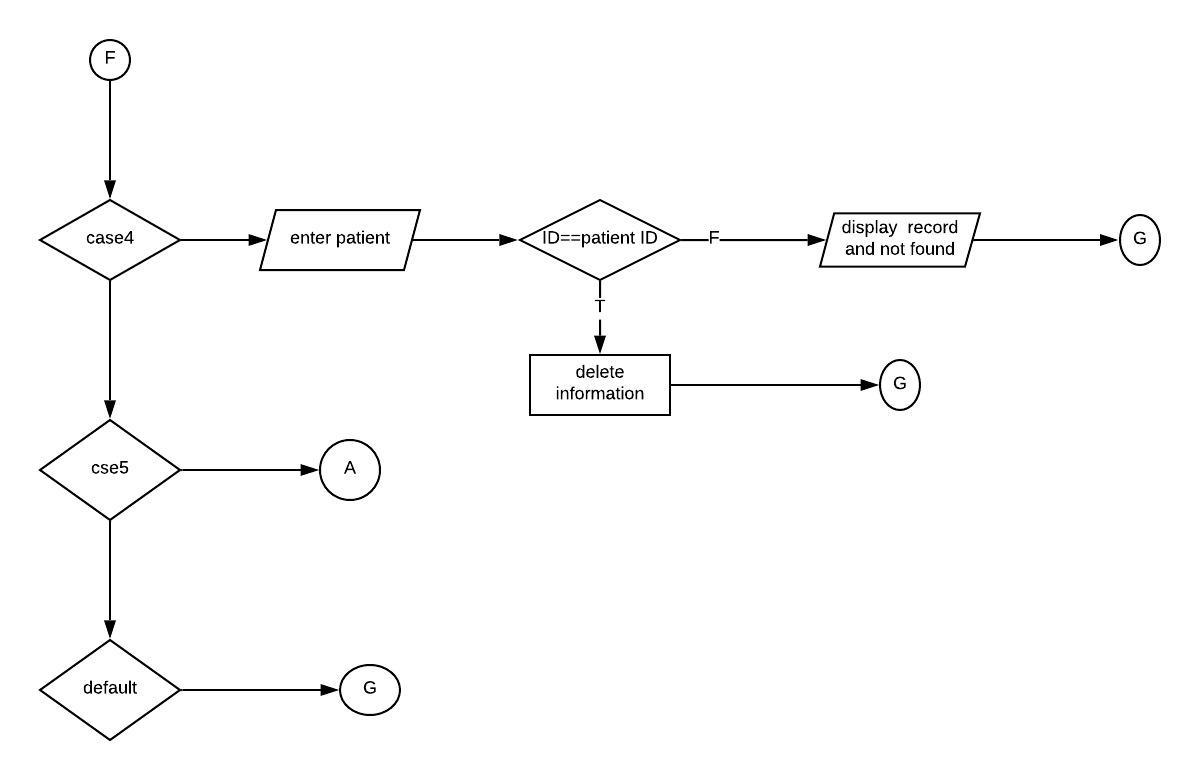
## 3.3 FLOWCART

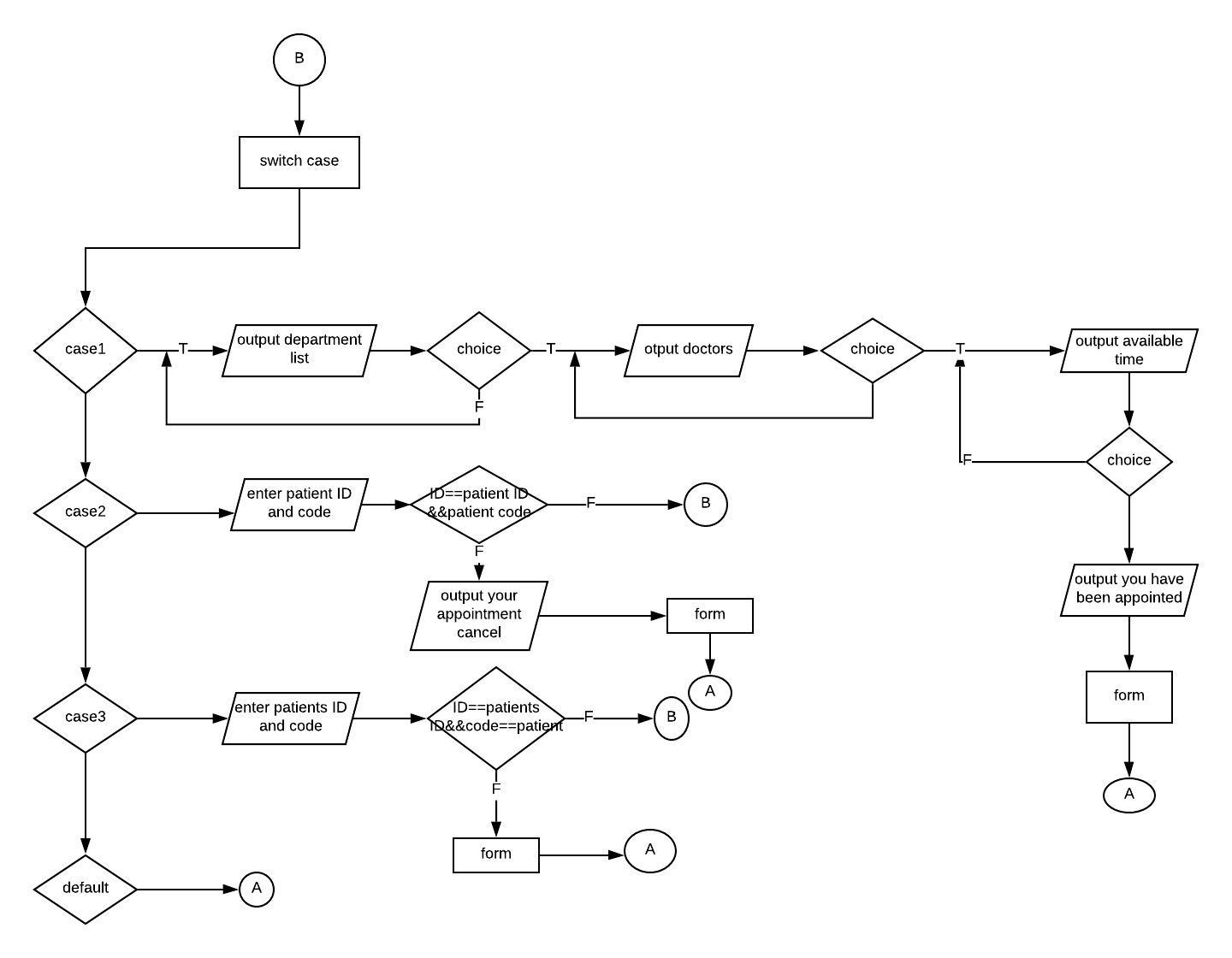
## **E:\Untitled Diagram.jpg**

## 

****

****

****



# **CHAPTER 4: TESTING**

## **4.1 Introduction**

Testing is the practice of making judgements regarding the extent to which the system meets, exceeds, or fails to meet stated objectives. Testing is about verifying that what was specified is what was delivered. It verifies that the system meets the functional performance, design and implementation requirement as per stated at the initial stage of the system. Testing (System Testing) involves testing the system to validate that it meets user specifications and objectives.

Testing objectives are:

* To analyze the test results.
* Test the system against user's requirements.

The components to be tested are:

* To test the system to validate it only accepts valid data.
* Check whether the system is giving the required output.

|  |  |  |  |
| --- | --- | --- | --- |
| **Input** | **Expected Output** | **Actual Output** | **Status** |
| To add patient’s detail for appointment | Doctors can get the information of patients | appointed | True |
| To re-enter the patient information | Doctor can get the information patients | Changed information | True |
| To view patient’s report | To display all the report of patient | Displayed | True |
| To change the information of patients | To be added updated information of patient | Added | True |
| To delete patient information | Removed from the file | Removed | True |
| To view department list | To view the department list | Displayed | True |
| Input exit | To clear all the appointment of the day and generate new ID for next day | cleared | True |

# **CHAPTER 5: CONCULSION**

The project **"A HOSPITAL"** is for computerizing the working in a hospital and is capable of providing easy and effective storage of information related to doctors and patients. This project takes care of all the requirements of an average hospital & is capable to provide easy & effective storage of information related to patients that come up to the hospital. The project has matched the objectives set at the time of project's concept submission.

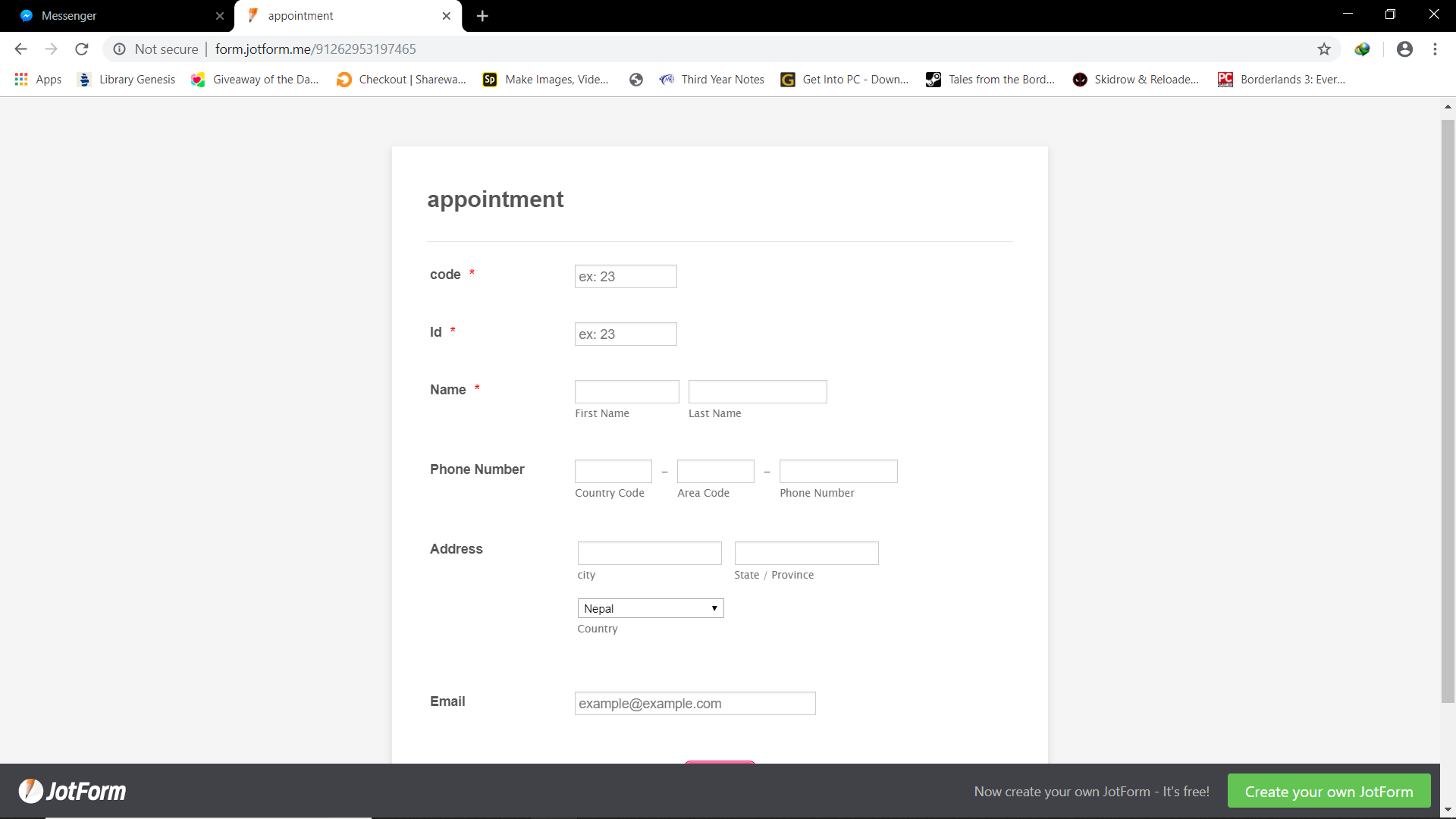
After completing this project, the project members are in the position to explain the programming concept and apply them to the modelling of real world system.

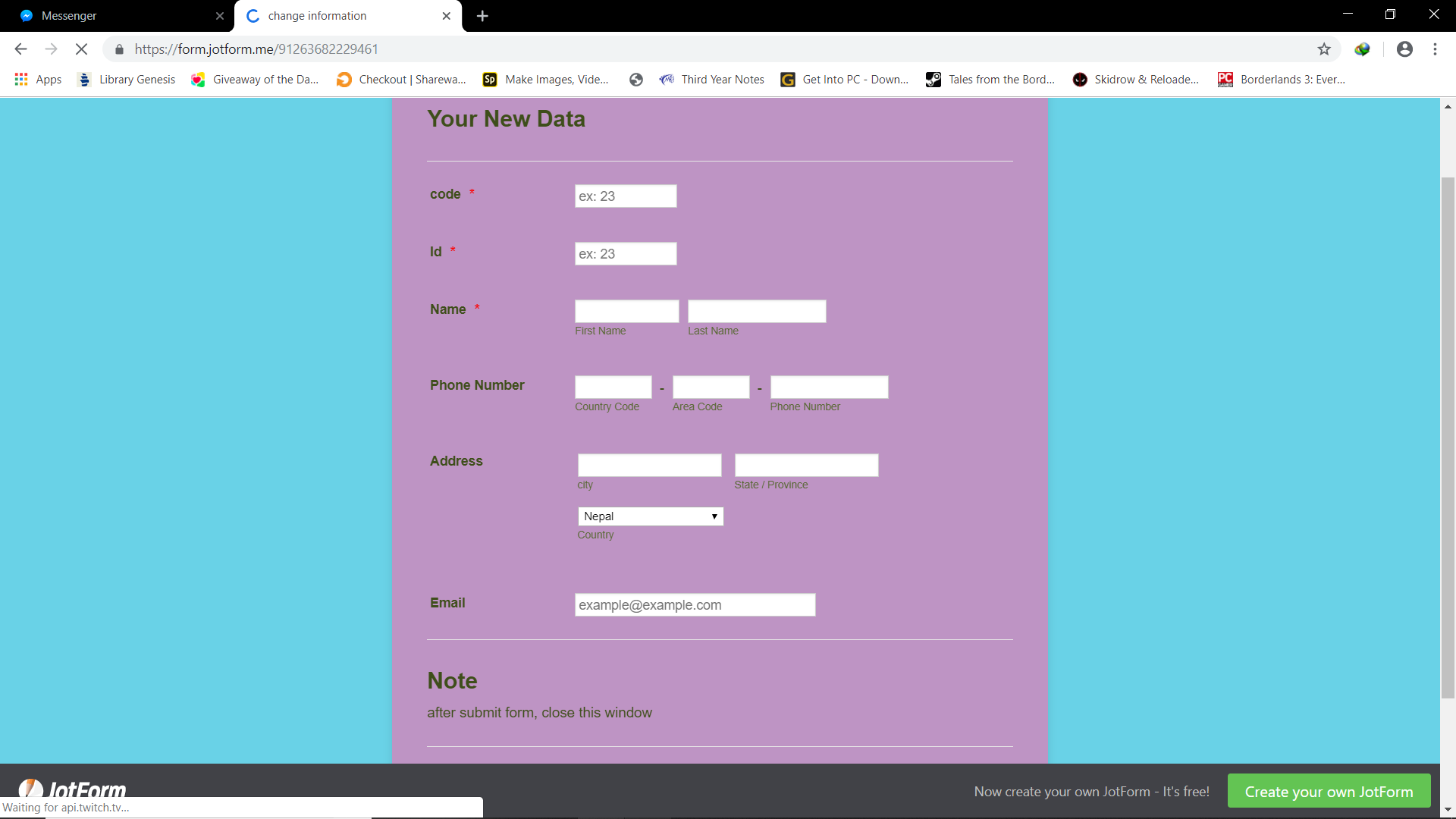
**Limitation**

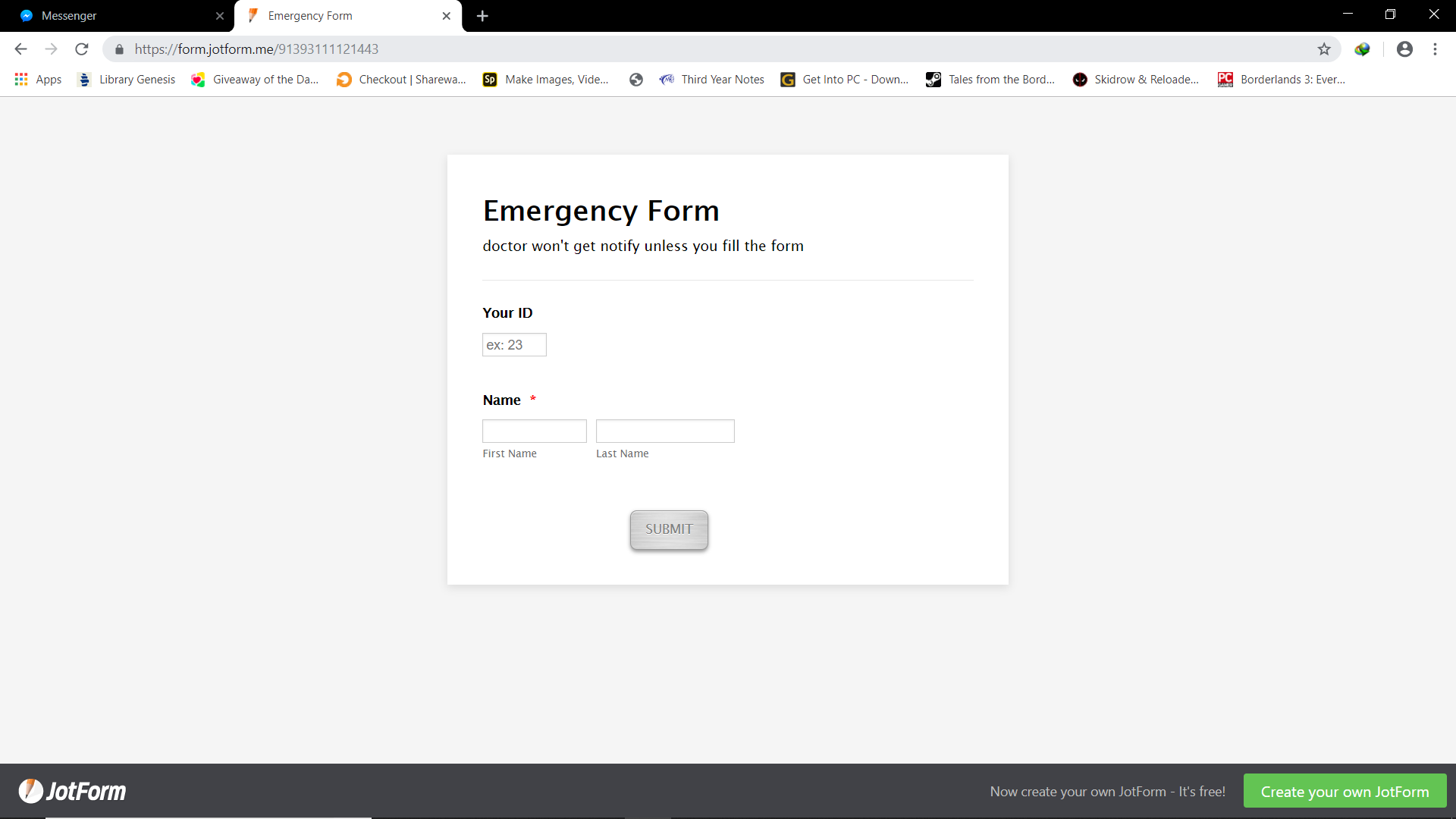
* Appointment fee
* Can be used as standalone only

**Future enhancement**

* Billing system

****

****



# **REFERENCE**

1. Dhulikhel Hospital.(2014). Retrieved March/April,2019,from https://www. Dhulikhelhospital.org/
2. Norvic Hospital. (1994). Retrieved March/April, 2018, from https://norvic hospital.com/
3. Community, G. (2011, August). Grande International Hospital. Retrieved March/April, 2019, from <https://www.grandehospital.com/>
4. Community, G. (2011, August). Grande International Hospital. Retrieved March/April, 2019, from <https://www.grandehospital.com/>
5. <https://www.udemy.com/c-for-technical-interview/>
6. Balguruswamy, "*Programming in C*", Tata McGraw-Hill Publishing,1992
7. Ram Datta Bhatta, "*A Textbook of C Programming*", (Reprint 2013), Shangrila Printing Services.