A
Semester Project-I Report
On
"COVID-19 MANAGEMENT SYSTEM"

In partial fulfillment of requirements for the degree of Bachelor of Technology In

Computer Science & Engineering (Data Science)

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CERTIFICATE

This is to certify that the Semester Project-I entitled "**Covid-19 Management System**" has been carried out by team:

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under the guidance of **Prof. Atul. D. Mairale** in partial fulfillment of the requirement for the degree of Bachelor of Technology in Computer Science & Engineering (Data Science) (Semester-III) of Dr. Babasaheb Ambedkar Technological Univercity, Lonere during the academic year 2021-22.

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Project Team:

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5.1 Introduction

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CHAPTER - 1
INTRODUCTION

-

1.1 Overview

Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus.

Most people infected with the virus will experience mild to moderate respiratory illness and recover without requiring special treatment. However, some will become seriously ill and require medical attention. Older people and those with underlying medical conditions like cardiovascular disease, diabetes, chronic respiratory disease, or cancer are more likely to develop serious illness. Anyone can get sick with COVID-19 and become seriously ill or die at any age.

The best way to prevent and slow down transmission is to be well informed about the disease and how the virus spreads. Protect yourself and others from infection by staying at least 1 metre apart from others, wearing a properly fitted mask, and washing your hands or using an alcohol-based rub frequently. Get vaccinated when it’s your turn and follow local guidance.

The virus can spread from an infected person’s mouth or nose in small liquid particles when they cough, sneeze, speak, sing or breathe. These particles range from larger respiratory droplets to smaller aerosols. It is important to practice respiratory etiquette, for example by coughing into a flexed elbow, and to stay home and self-isolate until you recover if you feel unwell.

1.1 Abstract

Covid-19 Management System provides the benefits of streamlined operations, enhanced administration, control, superior patient care, strict cost control and improved profitability. It is powerful, flexible, and easy to use and is designed and developed to deliver real conceivable benefits to hospitals. More importantly it is backed by reliable and dependable support. The project 'Covid-19 Management System' is based on the database, object oriented and networking techniques. As there are many areas where we keep the records in database for which we are using MY SQL software which is one of the best and the easiest software to keep our information. Covid-19 Management System is custom built to meet the specific requirement of the mid and large size hospitals across the globe. All the required modules and features have been particularly built to just fit in to your requirement. This package has been widely accepted by the clients in India and overseas. Not stopping only to this but they are highly satisfied and appreciating. Entire application is web based and built on 3 tier architecture using the latest technologies. The sound database of the application makes it more users friendly and expandable. The package is highly customizable and can be modified as per the needs and requirements of our clients. Prolonged study of the functionalities of the hospital and its specific requirement has given it a wonderful shape both technically and usability wise. It covers all the required modules right from Patient Registration, Medicine details, Doctor, Wards, , Admin, Store, Patient appointment ,record modification, discharge details etc.

1.2 Significance of the Study

The study is important to the Covid-19 patients since they could have medical information without experiencing delays and incorrect information. If they wanted to access their medical history, they would not be going through a difficult process..

The study was also significant to the staffs since they would be able to register, delete, and doctor information within the system. It was beneficial to the hospital since it could improve their management through connecting all their existing computers in one system. In general, the study was important to the hospital and patients for it could serve as an applicable tool to maintain the productivity and quality of service in the hospital.

Covid is a leading among the public hospital. Health system functioning depends on production and use of quality health data and

information at all levels of the health system. This study serves as a starting point for the assessment of HIS based on the situation in public to identify the strengths and weakness of the system in improving health system functioning. The study forms a basis for further research on evidence based management of health services in general and specifically lead to generation of new ideas for better and more efficient management of health facilities in Nairobi and the country at large. The study will look at the use of hospital information system in a private and a public hospital.

Findings and recommendations of the study would contribute towards the ongoing efforts of ministry of health to develop better health management operations system that would benefit facilities and healthcare workers identify their weakness and thus propose better ways that could help improve their efficiency through improved information use. The findings of the study will be used by all health care workers and health care managers as and will not rely on haphazard personal experiences or subjective personal judgments or of friends /relative other than base their decisions and actions on concrete evidence and thus help re-invent themselves as problem solvers.

1.3 Related Work

Covid-19 Management System is designed for multispecialty hospitals, to cover a wide range of hospital administration and management processes of patient-centric system. It is an integrated end- to-end covid-19 Management System that provides relevant information across the hospital to support effective decision making for patient care (medical records management and billings), and hospital administration, in

a seamless flow. In existence, some researchers have contributed positively in the improving of health care institutions management systems. Therefore, we discuss in this section below, some of the related works done in hospital management system by research field. The work of [8] focused on understanding the performance indicators of Hospital information systems , summarizing the latest commonly agreed standards and protocols like Health Level Seven standards for mutual message exchange, HIS components, etc. The study is qualitative and descriptive in nature and most of the data is based on secondary sources of survey data. However, the researchers identified several modules for the implementation of Covid-19 Management and Covid-19 Management System in which Emergency Management was one of them. The contents operation within this module excludes the incorporation and use of Biometric Fingerprint Technology. Thus, this indicates that emergency cases in the intensive units where the registration of patients is trivial cannot be handled adequately with respect to time. It was noted that the success factors of E – HMS / HIS tend to vary depending upon leadership support, training, technology adoption, user friendliness, etc. within a country.

1.4 Project objectives

The objective of this project is to develop Covid-19 management software based on Microsoft window application with structured Query language (MY-SQL and SQL Server as a database) as the back-end database hospital from file based system to a computer database system. This software will help the company to be more efficient in handling the daily activities and

registration of their patients. The purpose of this project is to give a complete requirement documentation, design, and implementation of the software. It also explains the user interface, hardware and software and different models that could be used to develop software such as this.

Hospital are the essential part of our lives, providing best medical facilities to people suffering from various ailments, which may be due to change in climatic conditions, increased work-load, emotional trauma stress etc. t is necessary for

1.5 Background to the Study

Healthcare especially in the developed world is characterized by rapidly increasing use of information technology in patient care, increasing documentation, coding and billing, and management. Rise of health information technology worldwide is increasing the efficiency of health service delivery, reducing medical errors, improving quality of care and providing better information for patients and physicians.

The overall goal of the information management function is to obtain, manage, and use information to improve covid patients care and medical services, performance, governance and management and support processes.

The importance of healthcare to individuals and governments and its growing costs to the economy have contributed to the emergence of healthcare as an important area of research for scholars in business and other disciplines. Information systems (IS) have much to offer in managing healthcare costs and in improving the quality of care (Kolodner et al. 2008: 394). In additional, Piontek et al., (2010: 618) asserts that healthcare influences the quality of human lives and function in the society. Healthcare mistakes have serious consequences that can affect ability to carry out social and productive endeavors. Recent reports highlight the gravity of adverse events in hospitals and the dangers such events pose to individuals and the public. Healthcare information systems have changed the healthcare industry drastically over the last decade as well as the last few years (Abraham & Jungles).

1.8 Information about programming languages for the project

SQL

The origins of the SQL take us back to the 1970s, when in the IBM laboratories, new database software was created - System R. And to manage the data stored in System R, the SQL language was created. At first it was called SEQUEL, a name which is still used as an alternative pronunciation for SQL, but was later renamed to just SQL. In 1979, a company called Relational Software, which later became Oracle, saw the commercial potential of SQL and released its own modified version, named Oracle V2.

Now into its third decade of existence, SQL offers great flexibility to users by supporting distributed databases, i.e. databases that can be run on several computer networks at a time. Certified by ANSI and ISO, SQL has become a database query language standard, lying in the basis of a variety of well-established database applications on the Internet today. With the progress in database technology SQL-based applications have become increasingly affordable for the regular user. This is due to the introduction of various open-source SQL database solutions such as MySQL, PostgreSQL, and SQLite.

SQL Standard

The SQL Standard has gone through a lot of changes during the years, which have added a great deal of new functionality to the standard, such as

support for XML, triggers, regular expression matching, recursive queries, standardized sequences and much more. Due to SQL Standard's sheer volume, a lot of database solutions based on it, such as MySQL or PostgreSQL; do not implement the whole standard. In a lot of cases, the database behavior for file storage or indexes is not well defined and it's up to the vendors of the various SQL implementations to decide how the database will behave. This is the reason why, even though all SQL implementations have the same base, they are rarely compatible.

SQL Language elements

The SQL language is based on several elements. For the convenience of SQL developers all necessary language commands in the corresponding database management systems are usually executed through a specific SQL command-line interface (CLI).

- **Clauses** - the clauses are components of the statements and the queries
- **Expressions** - the expressions can produce scalar values or tables, which consist of columns and rows of data
- **Predicates** - they specify conditions, which are used to limit the effects of the statements and the queries, or to change the program flow
- **Queries** - a query will retrieve data, based on a given criteria
- **Statements** - with the statements one can control transactions, program flow, connections, sessions, or diagnostics. In database systems the SQL statements are used for sending queries from a client program to a server where the databases are stored. In response,

the server processes the SQL statements and returns replies to the client program. This allows users to execute a wide range of amazingly fast data manipulation operations from simple data inputs to complicated queries.

CHAPTER -2
PROJECT PLANNING

2.1 Introduction:

This chapter provides a comprehensive definition of the problem, covid patients information, and then provides a conceptual strategy for problem solving, ways to solve it, the importance of database management, and then it passes to theoretical program design for problem solving and technology. The study used to solve this problem.

2.2 Definitions of problems

A theoretical study of the problem and how to solve it

Problems with conventional system:

1. Lack of immediate retrievals: -The information is very difficult to retrieve and to find particular information like- E.g. - To find out about the patient's history, the user has to go through various registers. This results in inconvenience and wastage of time.

2. Lack of immediate information storage: - The information generated by various transactions takes time and efforts to be stored at right place.

3. Lack of prompt updating: - Various changes to information like patient details or immunization details of child are difficult to make as paper work is involved.

4. Error prone manual calculation: - Manual calculations are error prone and take a lot of time this may result in incorrect information. For example: calculation of patient's bill based on various treatments.

5. Preparation of accurate and prompt reports: - This becomes a difficult task as information is difficult to collect from various registers

2.3 Methodology. Project planning and scheduling

Project planning is part of project management, which relates to the use of schedules such as Gantt charts to plan and subsequently report progress within the project environment. Initially, the project scope is defined and the appropriate methods for completing the project are determined. Following this step, the durations for the various tasks necessary to complete the work are listed and grouped into a work breakdown structure. The logical dependencies between tasks are defined using an activity network diagram that enables identification of the critical path.

We have used Iterative and Incremental Development model (IID) for our project development. This development approach is also referred to as Iterative Waterfall Development approach. Iterative and Incremental Development is a software development process developed in response to the more traditional waterfall model. This model is designed to take care of such big project. The large and complicate project chiefly demand better development and testing procedure. The waterfall model is well known for its repeated testing process. Hence I choose the waterfall model for developing my software.

2.4 Design and Implementation of Covid-19 Management System

Hospitals are information-intensive organization and pay great attention to information management and processing, which have to be to be carried out using appropriate information system. Hospital information system and clinical information system are computer- based systems used in hospitals to assist the overall management of the health care facility through information about diseases and information about patient care (Haux, 2004) in terms of record keeping of patient information, accounting, human resource management, asset management, and stock management and knowledge management.

Task of the hospital information system is to support patient care and associated administration by providing: information, primarily about patients that information must be correctly collected, stored, processed and documented; Knowledge, primarily about diseases- such as drug actions and adverse effects- to support diagnosis and therapy; information about the quality of patient care and hospital performance and costs (Haux, 2004). Hospital management system is of great importance in modern hospital. Liu stated that the system must be made of several parts such as: marking card, registration, medical treatment, drug information management, pharmacy dispensing, emergency, data dictionary maintenance, database backup, report printing and so on. There are seven function modules that are to be considered, including: Emergency Register Management, Price Making, Charge, Nurse Station Management, and Data Dictionary Maintenance. Based on the above design, the system can provide high quality treatments and good services for patients and their families.

2.5 Technology and Efficiency

Technology as the sub-factors hardware, software and connectivity, the hardware needed should be identified before the introduction of the system. This means that at the start of the project an assessment should be made about the hardware already available and the hardware which is still needed for full introduction of the system. One of the major concerns with IS, is the fact that users often claim that they are not user friendly and lack intuitive data input. The way in which data is put into a system reflects the individual's practice style. The interface design and structure of the data need therefore to conform to each other. The other issue is that it depends on the technology being used. Flexibility and adaptability is also a challenge when introducing such a system. Looking for the right terminology for input is also a concern Software content issues include the lack of local content creation, the language used and the relevance of content to the local situation. Appropriate language is frequently neglected in ICT programmers and little content is available in local languages for health programmers. Another concern of any health organization in the integration of health information systems is the fact that healthcare institutions need timely patient information from various sources at the point of- care. This means buying a fully functional system fulfilling all their needs from one vendor. This suggests working with standards for better data integration (Kuhn et. al2001). With connectivity one has to deal with things like the lack of an enabling telecom policy and regulatory environment; access to electricity, solar power options, back-ups, insufficient infrastructure, connectivity access and high costs. The better these things are functioning the greater the chance for successful implementation. The actual integration of isolated systems is an important

issue for the success of an information system. The use of simpler systems fitted better with the clinical work processes should also add to better solutions.

2.6 Financial Resources

Generally, there is little investment in ICT for health in most developing countries. The picture is one of fragmentation, with many different varieties of ICT being acquired from different donors. Invariably, there is no national health information and information technology infrastructure to underpin the delivery of health care. It is very important to make a realistic financial plan for all the costs in the system before the introduction of the health management information system (Gladwin et. al 2003:12).

Sustainability is very important when considering the introduction of the health management information system in the organization, especially in local hospitals in developing countries. Being able to continue supporting the system financially on the long run is the important issue to consider. Plans for sustainability should be clearly expressed ensuring that capital investments and costs are identified up front as well as ICT, capacity and infrastructure requirements. Monitoring and evaluation is also part of the sustainability failure to adopt a particular IM strategy may signal inappropriateness. Encouraging partnerships between stakeholders on local, national, regional and international level sustainability can grow. data analysis(EDA),Data visualization, data Aggregation techniques etc.

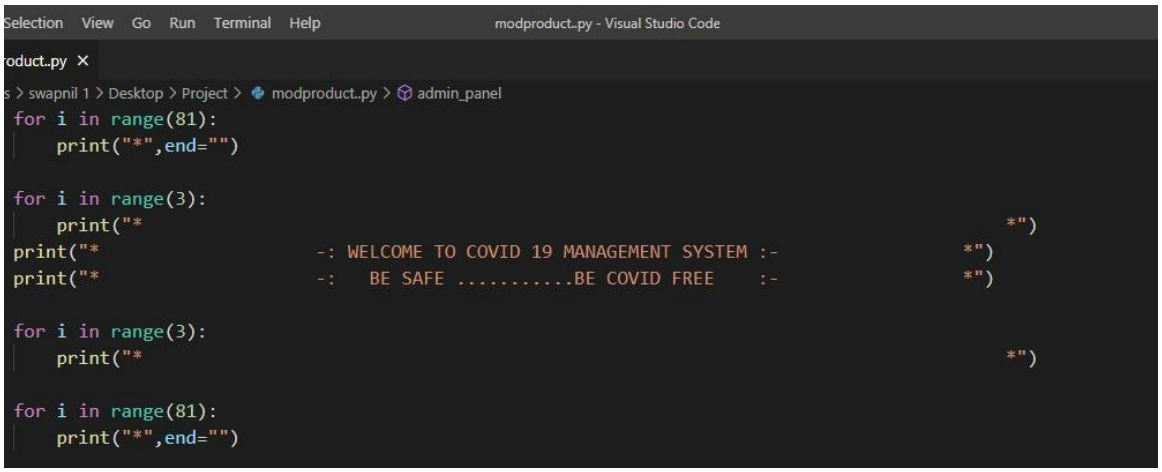
CHAPTER -3
EXPLAIN THE PRACTICAL

3.1 Introduction

In this chapter, we explain how to work on the application, enter the mechanism, and use it with pictures, along with an explanation of each image about its content.

Explain the practical application :

3.1 Login interface :-



Output :

3.2 Connection to SQL :

```
import mysql.connector
mydba=mysql.connector.connect(host='localhost',user='root',passwd='tiger')
mycursor=mydba.cursor()

mycursor.execute("create database if not exists covid_19_project")
mycursor.execute("use covid_19_project")
mycursor.execute("create table if not exists doctor(Name varchar(20) not null ,Education varchar(15) not null
mycursor.execute("create table if not exists patient(Patient_id int not null,Name varchar(20) not null,Addres
mycursor.execute("create table if not exists oxygen_cylinders_info(Name varchar(20) not null,Patient_id BIGIN
mycursor.execute("create table if not exists discharge_patient_name(Name varchar(20),Date DATE not null)")
```

3.3 Function of main menu :

```
def main_menu():
    print("\n[1]-> Admin panel  \n[2]-> Doctor menu   \n[3]-> Patients   \n[4]-> Covid patients details")
    print("[5]-> Exit")
print("\n")
```

```
--------------------------------------------------------------------------------
[1]-> Admin panel
[2]-> Doctor menu
[3]-> Patients
[4]-> Covid patients details
[5]-> Exit
--------------------------------------------------------------------------------
=> Enter choice :
```

3.4 function of Admin panel :

```
--------------------------------------------------------------------------------
[1]-> Admin panel
[2]-> Doctor menu
[3]-> Patients
[4]-> Covid patients details
[5]-> Exit
--------------------------------------------------------------------------------
=> Enter choice : 1
--------------------------------------------------------------------------------
[1]-> Add patients
[2]-> Oxygen cylinder releated details
[3]-> Help and guidelines releted to a covid 19
[4]-> Main menu
--------------------------------------------------------------------------------
=>Enter your choice :2
--------------------------------------------------------------------------------

[1]-> Book Oxygen Cylinder
[5]-> Main menu
=>Enter choice :5
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
[1]-> Admin panel
[2]-> Doctor menu
[3]-> Patients
[4]-> Covid patients details
[5]-> Exit
--------------------------------------------------------------------------------
=> Enter choice :
```

3.5 Function of Doctor menu :

```
def doctor_menu():
    for i in range(81):
        print("-",end="")
    print("")

    print("[1]-> Doctors information ")
    print("[2]-> Ward info under doctor observation")
    print("[5]-> Main menu :")
    for i in range(81):
        print("-",end="")
    print("")
    choice22=int(input("->Enter choice : "))
    for i in range(81):
        print("-",end="")
    print("")

    if(choice22==1):

        mycursor.execute("select * from doctor")
        result=mycursor.fetchall()
        for row in result:
            print("Name : ",row[0])
            print("Education :",row[1])
            print("Age: ",row[2])
            print("Gender: ",row[3])
            print("Mobile no :",row[4])
            print("")

        choice223=int(input("->Add doctor information press 1 Otherwise press any key for main menu :"))
        if(choice223==1):
            sql = "INSERT INTO doctor(Name,Education,DAge,Gender,Mobile_no,Dward_no) VALUES (%s,%s,%s,%s,%s,%s)"
            Name=input("->Enter name : ")
            Education=input("->Enter education :")
            DAge=input("->Enter age :")
            Gender=input("->Enter gender :")
            Mobile_no=input("->Enter mobile no:")
            Dward_no=input("->Enter ward no :")
            val=(Name,Education,DAge,Gender,Mobile_no,Dward_no)
            mycursor.execute(sql,val)
            mydba.commit()
            print("You have successfully entered doctor data.....!!")


            mainfunction()
        else:


            mainfunction()



    if(choice22==2):
        mycursor.execute("select Name ,Dward_no from doctor")
        fetc=mycursor.fetchall()
        for r in fetc:
            print("Name :",r[0])
            print("Ward No :",r[1])
```

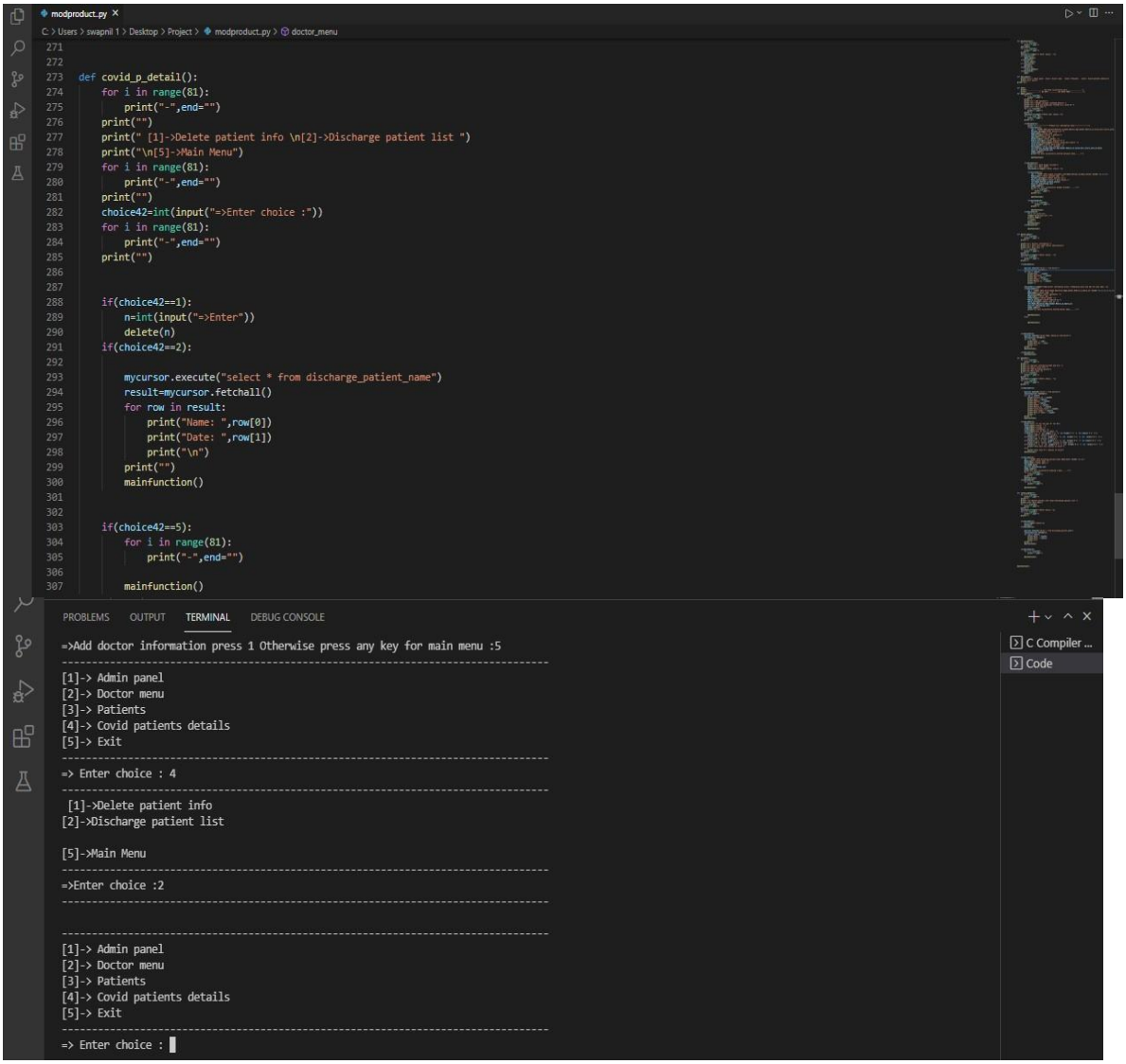
```
--------------------------------------------------------------------------------
[1]-> Admin panel
[2]-> Doctor menu
[3]-> Patients
[4]-> Covid patients details
[5]-> Exit
--------------------------------------------------------------------------------
=> Enter choice : 2
--------------------------------------------------------------------------------
[1]-> Doctors information
[2]-> Ward info under doctor observation
[5]-> Main menu :
--------------------------------------------------------------------------------
=>Enter choice : 1
--------------------------------------------------------------------------------
Name :  Swapnil More
Education : MBBS
Age:  19
Gender:  Male
Mobile no : 7798972637

=>Add doctor information press 1 Otherwise press any key for main menu :
```

3.6 function of patient

```
        mainfunction()

def patient():
    for i in range(81):
        print("-",end="")
    print("")
    print("[1]->Patient information(name and all) ")
    print("[2]->Basic Covid test ")
    print("[3]->Add Discahrge patient")
    print("[5]->Main menu :")
    for i in range(81):
        print("-",end="")
    print("")
    choice32=int(input("->Enter choice : "))
    for i in range(81):
        print("-",end="")
    print("")

    if(choice32==1):

        mycursor.execute("select * from patient")
        result=mycursor.fetchall()
        for row in result:
            print("Patient_id :",row[0])
            print("Name :",row[1])
            print("Address :",row[2])
            print("Age :",row[3])
            print("Gender :",row[4])
            print("Mobile_no :",row[5])
            print("Covid_test_result :",row[6])
            print("Ward number :",row[7])
            print("Date of Admit :",row[8])
            print("")
        print("")
        mainfunction()

    if(choice32==2):
        print("Enter 'Y' for Yes and 'N' for No")
        fever=input("->Fever : ")
        cough=input("->Cough :")
        tired=input("->Tiredness :")
        lotos=input("loss of test or smell :")
        if(fever=='Y'or 'y' and cough=='Y'or 'y' and tired=='Y'or 'y' and lotos=='Y'or 'y'):
            print("\n98'%' chances of Covid")
        elif(fever=='Y' or 'y'and  cough=='Y'or 'y' and  tired=='Y'or 'y' and  lotos=='N'or 'n'):
            print("\n88 '%'chances of Covid")
        elif(fever=='Y'or 'y' and  cough=='Y'or 'y' and  tired=='N'or 'n' and lotos=='N'or 'n'):
            print("\n50'%' chances 50'%' chances of Comm Cold")
        elif(fever=='Y' or 'y' and  cough=='N'or 'n' and  tired=='N'or 'n' and  lotos=='N'or 'n'):
            print("\nYou have less chances to Covid ")
        else:
            print("\nYou have 0'%' chances of Covid")
        mainfunction()


    if(choice32==3):
        sql = "INSERT INTO discharge_patient_name (Name,Date) VALUES (%s,%s)"
        Name=input("->Enter name :")
        Date=input("->Enter date:")
        val=(Name,Date)
```

```
--------------------------------------------------------------------------------
[1]-> Admin panel
[2]-> Doctor menu
[3]-> Patients
[4]-> Covid patients details
[5]-> Exit
--------------------------------------------------------------------------------
=> Enter choice : 2
--------------------------------------------------------------------------------
[1]-> Doctors information
[2]-> Ward info under doctor observation
[5]-> Main menu :
--------------------------------------------------------------------------------
=>Enter choice : 1
--------------------------------------------------------------------------------
Name :  Swapnil More
Education : MBBS
Age:  19
Gender:  Male
Mobile no : 7798972637

=>Add doctor information press 1 Otherwise press any key for main menu :
```

3.7function of Covid patient detail



```
def covid_p_detail():
    for i in range(81):
        print("-",end="")
    print("")
    print(" [1]->Delete patient info \n[2]->Discharge patient list ")
    print("\n[5]->Main Menu")
    for i in range(81):
        print("-",end="")
    print("")
    choice42=int(input("=>Enter choice :"))
    for i in range(81):
        print("-",end="")
    print("")


    if(choice42==1):
        n=int(input("=>Enter"))
        delete(n)
    if(choice42==2):

        mycursor.execute("select * from discharge_patient_name")
        result=mycursor.fetchall()
        for row in result:
            print("Name: ",row[0])
            print("Date: ",row[1])
            print("\n")
        print("")
        mainfunction()


    if(choice42==5):
        for i in range(81):
            print("-",end="")

        mainfunction()
```

```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE

=>Add doctor information press 1 Otherwise press any key for main menu :5
--------------------------------------------------------------------------------
[1]-> Admin panel
[2]-> Doctor menu
[3]-> Patients
[4]-> Covid patients details
[5]-> Exit
--------------------------------------------------------------------------------
=> Enter choice : 4
--------------------------------------------------------------------------------
 [1]->Delete patient info
[2]->Discharge patient list

[5]->Main Menu
--------------------------------------------------------------------------------
=>Enter choice :2
--------------------------------------------------------------------------------


--------------------------------------------------------------------------------
[1]-> Admin panel
[2]-> Doctor menu
[3]-> Patients
[4]-> Covid patients details
[5]-> Exit
--------------------------------------------------------------------------------
=> Enter choice :
```

C Compiler ...
Code

3.8Calling main function

```
def mainfunction():
    for i in range(81):
        print("-",end="")
    main_menu()
    for i in range(81):
        print("-",end="")
    print("")
    choice1=int(input("=> Enter choice : "))
    if (choice1==1):
        admin_panel()
    if(choice1==2):
        doctor_menu()
    if (choice1==3):
        patient()
    if(choice1==4):
        covid_p_detail()
    if(choice1==5):
        end()
```


[1]-> Admin panel
[2]-> Doctor menu
[3]-> Patients
[4]-> Covid patients details
[5]-> Exit
=> Enter choice :

CHAPTER - 4
RESULT

Results and Discussion

The project results are summarized that despite several difficulties, whether software or bad support, we have been able to program a simple and basic program for Covid-19 management and knowing almost all details, whether for patients or rooms or for the staff and we can use and apply in Iraqi hospitals to support hospitals and help by introducing technology to hospitals and also we can in the future of work On developing this project to be better in all respects, we also explained in our research the problem that the project will address and the people's view of the problem and how the work was previously and how we are trying through our research to help, even with a small part of treating the problem and pushing technology forward and help to introduce computers and their technologies to Iraqi hospitals, and this is important This position, as all developed countries do not use the papers in the hospital records or in their financial transactions, but have moved to apply the technology in their hospitals and transfer them to the electronic system.

This project has been a rewarding experience in more than one way. The entire project work has enlightened us in the following areas:

a) We have gained an insight into the working of the HOSPITAL. This represents a typical real world situation.

b) Our understanding of database design has been strengthened this is because in order to generate the final reports of database designing has to be properly followed.

c) Scheduling a project and adhering to that schedule creates a strong sense of time management.

d) Sense of teamwork has developed and confidence of handling real life project has increased to a great extent.

e) Initially, there were problem with the validation but with discussions, we were to implement validations.

CHAPTER - 5
CONCLUSION

5.1 Introduction

This chapter gives an overview of the findings, conclusion and recommendations made from the study. These are based on the objectives and research questions of the study.

The aim of the study was to find out the use of Covid-19 information management system in provision of relevant and effective services in Kenyatta hospital and Mater hospitals. It is a comparative study between a private and public hospital.

Objectives of the study were to:

1. To assess the use of the hospital information systems in the two selected hospitals.

2. Establish the extent to which the Covid-19 information system provides accurate and relevant information of the patient.

3. Establish the perception of the healthcare workers towards the system.

4. Find out the challenges faced in the use of Covid-19 information management systems in the hospitals.

5. Find out possible solutions to the identified.

5.2Challenges in Use of Hospital Management System

The fourth objective of this study was to establish challenges healthcare workers in both hospitals encounter in the use of Covid-19 information management system.

The main challenges encountered in:

Mater covid-19 database as system being slow, poor changeover between the new and old system, Few ICT staff to assist when needed, system keeps going on and off, and incapability between the old and new system., few ICT staff to assist when needed, few computers for use, inadequate software coverage, systems is slow and lack of training of users, system not yet implemented in some areas. Were found out as system providing inaccurate information, respondents not knowledgeable with the system, System not user friendly, and employees having negative attitude towards the system. Respondents' recommendations on improving system. In Mater database more respondents would want development of electronic resource planning system for the hospital and development of specific tools to the current structure.

5.3 Conclusion and Future work

The projet covid-19 Management System is for computerizing the working in a hospital. The software takes care of all the requirements of an average hospital and is capable to provide easy and effective storage of information related to patients that come up to the hospital.

It generates test reports; provide predication about including various tests. In short it give us proper management of database and its too easy than traditional database storing system