A PROJECT REPORT ON

Hospital MANAGEMENT SYSTEM

CERTIFICATE

This is to certify that **TANUJ BHATIA** along with his teammates **Vijit Verma , Tanush chauhan ,Tanmay M.** of **ABES ENGINEERING COLLEGE** has done his project on

HOSPITAL MANAGEMENT . They has taken interest and has shown utmost sincerity in completion of this project.

Hardware and Software Requirements

Hardware Requirements:

A computer or laptop with-

   • Operating system – Windows 7 or above • x86 64-bit CPU (Intel / AMD architecture) • 4 GB RAM.

• 5 GB free disk space.

Software Requirements:

- Python 3.7 or above as front – end development environment
- MySQL as back – end server with database for testing
- Mysql.connector to connect python module with database
- MS Word for documentation

Project Synopsis

Title of the project:

Hospital Management System

Definition:

Design a project to analyze the data set of a hospital. To manage the data of the doctors and patients associated to different departments in structured tables with two different modes : Admin and User.

Team Members:

Tanuj Bhatia , Tanush Chauhan
   Tanmay M , Vijit Verma

Reasons for choosing the topic:

Hospitals have new patients every other hour; managing such vast data manually is a tedious and tiring job. That's why to simplify their task and for the smooth functioning, I took the challenge and started working on this project.

Objective:

To manage data of a hospital using Admin and User mode. The Admin mode will allow to add, display, delete and edit patient's/doctor's records, while the User mode will allow to see details of departments and doctors of the hospital and to view patient details.

Limitations:

- Needs more customization to fulfill the need of every hospital.
- More functionality can be added as per requirement.

CODING

```python
def addpatient():

    import mysql.connector

myconn=mysql.connector.connect(host="localhost",user="root",passwd="tanuj",database='HospitalManagement')

    cur=myconn.cursor()

    patient_ID= int(input("Enter patient ID : "))

    Name=input("Enter Patient name : ")

    Age=int(input("Enter patient age : "))

    Gender=input("Enter patient gender : ")

    Phoneno=int(input("Enter patient phone number : "))

    Department=input("Enter patient department : ")

    DoctorName=input("Enter name of doctor following the case : ")

    query="insert into  patientdatabase(Patient_id,Name,Age,Gender,Phone_Number,Department,Doctorname) values('%d','%s','%d','%s','%d','%s','%s')"%(patient_ID,Name,Age,Gender,Phoneno,Department,DoctorName)

    cur.execute(query)

    myconn.commit()

    cur.close()

    print("----------------------Patient added successfully----------------------")


def displaypatient():

        import mysql.connector

myconn=mysql.connector.connect(host="localhost",user="root",passwd="tanujbhatia",database='HospitalManagement')

        cur=myconn.cursor()

        patientID = int(input("Enter patient ID : "))

        cur.execute("select * from patientdatabase where Patient_id='%d'" %patientID)

        rec=cur.fetchall()

        if cur.rowcount==1:
```

```python
        for r in rec:

            print(" patient name              : ",r[1])

            print(" patient age               : ",r[2])

            print(" patient gender            : ",r[3])

            print(" patient phone number         : ",r[4])

            print(" patient's department        : ",r[5])

            print(" patient is followed by doctor : ",r[6])

        else:

            print("Patient ID not found")

        cur.close()



def deletepatient():

        import mysql.connector

myconn=mysql.connector.connect(host="localhost",user="root",passwd="tanujbhatia",database='HospitalMa
nagement')

        cur=myconn.cursor()

        patientid=int(input("enter patient id to delete"))

        ch=input('Are you sure you want to delete the record( y/n) ?')

        if ch=='y':

            a="delete from patientdatabase where Patient_id ='%d'"%(patientid)

            cur.execute(a)

            if cur.rowcount>=1:

                myconn.commit()

                print("total records deleted ", cur.rowcount)

                print("---------------------Patient data deleted successfully---------------------")

            else:

                print("Invalid Patient ID")

        cur.close()
```

```python
def editpatient():

    import mysql.connector

    myconn=mysql.connector.connect(host="localhost",user="root",passwd="tanujbhatia",database='HospitalManagement')

    cur=myconn.cursor()

    patient_ID=int(input("Enter patient ID : "))

    a="select * from patientdatabase where Patient_ID='%d'"%(patient_ID)

    cur.execute(a)

    rec=cur.fetchone()

    if cur.rowcount==1:

        print(rec)

        while True :

            print("------------------------------------------")

            print("|To Edit pateint Department Enter 1 :    |")

            print("|To Edit Doctor following case Enter 2 : |")

            print("|To Edit pateint Name Enter 3 :          |")

            print("|To Edit pateint Age Enter 4 :           |")

            print("|To Edit pateint Gender Enter 5 :        |")

            print("|To Edit pateint Phone number Enter 6 :  |")

            print("|To be Back Enter B                      |")

            print("------------------------------------------")

            admin_choice = input("Enter your choice : ")

            if admin_choice == "1" :

                department=input("Enter new department: ")

                a="update patientdatabase set Department='%s' where Patient_id='%d'"%(department,patient_ID)

                cur.execute(a)

                myconn.commit()

                print("----------------------Patient Department edited successfully----------------------")
```

```python
            elif admin_choice == "2" :

                doctor=input("Enter new doctor name: ")

                a="update patientdatabase set Doctorname='%s' where
Patient_id='%d'"%(doctor,patient_ID)

                cur.execute(a)

                myconn.commit()

                print("---------------------Doctor following case edited successfully---------------------")

            elif admin_choice == "3" :

                name=input("Enter new patient name: ")

                a="update patientdatabase set Name='%s' where Patient_id='%d'"%(name,patient_ID)

                cur.execute(a)

                myconn.commit()

                print("---------------------Patient name edited successfully---------------------")

            elif admin_choice == "4" :

                age=int(input("Enter new patient age: "))

                a="update patientdatabase set Age='%d' where Patient_id='%d'"%(age,patient_ID)

                cur.execute(a)

                myconn.commit()

                print("---------------------Patient age edited successfully---------------------")

            elif admin_choice == "5" :

                gender=input("Enter new patient gender: ")

                a="update patientdatabase set Gender='%s' where
Patient_id='%d'"%(gender,patient_ID)

                cur.execute(a)

                myconn.commit()

                print("---------------------Patient gender edited successfully---------------------")

            elif admin_choice == "6" :

                phoneno=int(input("Enter new patient phone number: "))

                a="update patientdatabase set Phone_Number='%d' where
Patient_id='%d'"%(phoneno,patient_ID)
```

```python
                cur.execute(a)

                myconn.commit()

                print("----------------------Patient phone number edited successfully----------------------")
            elif admin_choice == "B" :

                break

            else :

                print("Please Enter a correct choice")

        else:

            print("Patient ID not found")

        cur.close()
def adddoctor():

    import mysql.connector


myconn=mysql.connector.connect(host="localhost",user="root",passwd="tanujbhatia",database='HospitalMa
nagement')

    cur=myconn.cursor()

    doctor_ID= int(input("Enter doctor ID : "))

    Name=input("Enter doctor name : ")

    Phoneno=int(input("Enter doctor phone number : "))

    Department=input("Enter doctor department : ")

    query="insert into doctordatabase(doctor_id,Name,Phone_Number,Department)
values('%d','%s','%d','%s')"%(doctor_ID,Name,Phoneno,Department)

    cur.execute(query)

    myconn.commit()

    print("----------------------Doctor added successfully----------------------")

    cur.close()
def displaydoctor():

    import mysql.connector


myconn=mysql.connector.connect(host="localhost",user="root",passwd="tanujbhatia",database='HospitalMa
nagement')
```

```python
        cur=myconn.cursor()

        doctorID=int(input("Enter doctor ID : "))

        cur.execute("select * from doctordatabase where doctor_id='%d'" %doctorID)

        rec=cur.fetchall()

        if cur.rowcount==1:

          for r in rec:

            print(" doctor name          : ",r[1])

            print(" doctor's phone number      : ",r[2])

            print(" doctor's department     : ",r[3])

        else:

            print("Doctor ID not found")

            cur.close()
def deletedoctor():

        import mysql.connector


myconn=mysql.connector.connect(host="localhost",user="root",passwd="tanujbhatia",database='HospitalMa
nagement')

        cur=myconn.cursor()

        doctorid=int(input("enter doctor id to delete"))

        ch=input('Are you sure you want to delete the record( y/n) ?')

        if ch=='y':

          a="delete from doctordatabase where doctor_id ='%d'"%(doctorid)

          cur.execute(a)

          if cur.rowcount>=1:

            myconn.commit()

            print("total records deleted ", cur.rowcount)

            print("---------------------Doctor data deleted successfully---------------------")

          else:

            print("Invalid Doctor ID")

          cur.close()
```

```python
def editdoctor():

        import mysql.connector

myconn=mysql.connector.connect(host="localhost",user="root",passwd="tanujbhatia",database='HospitalMa
nagement')

        cur=myconn.cursor()

        doctor_ID=int(input("Enter doctor ID : "))

        a="select * from doctordatabase where doctor_ID='%d'"%(doctor_ID)

        cur.execute(a)

        rec=cur.fetchone()

        if cur.rowcount==1:

            print(rec)

            while True :

                print("------------------------------------------")

                print("|To Edit doctor Name Enter 1 :         |")

                print("|To Edit doctor Department Enter 2 :    |")

                print("|To Edit doctor Phone number Enter 3 : |")

                print("|To be Back Enter B                 |")

                print("-----------------------------------------")

                admin_choice = input("Enter your choice : ")


                if admin_choice == "1" :

                    name=input("Enter new doctor name: ")

                    a="update doctordatabase set Name='%s' where doctor_id='%d'"%(name,doctor_ID)

                    cur.execute(a)

                    myconn.commit()

                    print("---------------------Doctor name edited successfully---------------------")


                elif admin_choice == "2" :

                    department=input("Enter new doctor department: ")
```

```python
                    a="update doctordatabase set Department='%s' where
doctor_id='%d'"%(department,doctor_ID)

                    cur.execute(a)

                    myconn.commit()

                    print("----------------------Doctor department edited successfully----------------------")



                elif admin_choice == "3" :

                    phoneno=int(input("Enter new doctor phone number: "))

                    a="update doctordatabase set Phone_Number='%d' where
doctor_id='%d'"%(phoneno,doctor_ID)

                    cur.execute(a)

                    myconn.commit()

                    print("----------------------Doctor phone number edited successfully----------------------")

                elif admin_choice == "B" :

                    break

                else :

                    print("Please Enter a correct choice")

        else:

            print("Doctor ID not found")

        cur.close()




print("****************************************************************************")

print("*            Welcome to Hospital Management System              *")

print("****************************************************************************")

attempt=0

while True:

    if attempt==3:

        break

    print("-------------------------")
```

```python
    print("|Enter 1 for Admin mode |\n|Enter 2 for user mode  |\n|Enter B to exit")

    print("-------------------------")

    Admin_user_mode=input("Enter your mode : ")

    if Admin_user_mode=="1" : #Admin mode

        print("*******************************\n|     Welcome to admin mode
|\n*******************************")

        Password=input("Please enter your password : ")

        while True :

            if attempt==3:

                break

            elif Password=="1234" :

                print("-----------------------------")

                print("|To manage patients Enter 1 |\n|To manage doctors Enter 2  |\n|To be back Enter B        |")

                print("-----------------------------")

                AdminOptions=input("Enter your choice : ")

                if AdminOptions=="1" : #Admin mode ; Pateints Management

                    while True:

                        print("---------------------------------")

                        print("|To add new patient Enter 1    |")

                        print("|To display patient Enter 2    |")

                        print("|To delete patient data Enter 3 |")

                        print("|To edit patient data Enter 4   |")

                        print("|To Back enter B                |")

                        print("---------------------------------")

                        Admin_choice=input("Enter your choice : ")

                        if Admin_choice == "1" : #Admin mode ; Pateints Management ; Enter new patient data

                            addpatient()

                        elif Admin_choice == "2" : #Admin mode; Pateints Management ; Display patient data

                            displaypatient()

                        elif Admin_choice == "3" : #Admin mode; Pateints Management ; Delete patient data
```

```python
        deletepatient()
    elif Admin_choice == "4" : #Admin mode; Pateints Management ; Edit patient data
        editpatient()
    elif Admin_choice=='B':
        break
    else:
        print("Please enter correct choice")


elif AdminOptions == "2" : #Admin mode ; Doctors Management
    while True:
        print("----------------------------------------")
        print("|To add new doctor Enter 1           |")
        print("|To display doctor Enter 2          |")
        print("|To delete doctor data Enter 3       |")
        print("|To edit doctor data Enter 4         |")
        print("|To be back enter B                  |")
        print("----------------------------------------")
        Admin_choice = input ("Enter your choice : ")
        if Admin_choice == "1" : #Admin mode ; Doctors Management ; Enter new doctor data
            adddoctor()
        elif Admin_choice == "2" : #Admin mode; Doctor Management ; Display doctor data
            displaydoctor()
        elif Admin_choice == "3" : #Admin mode; Dcotors Management ; Delete doctor data
            deletedoctor()
        elif Admin_choice == "4" : #Admin mode; Doctors Management ; Edit doctor data
            editdoctor()
        elif Admin_choice=='B':
            break
        else:
```

```python
                    print("Please enter correct choice")

                elif AdminOptions=='B':

                    break

                else:

                    print('Enter correct choice')


            elif Password!='1234':

                attempt+=1

                print("Incorrect password")

                if attempt==3:

                    print('No more tries')

                    break

                else:

                    Password=input('Enter password')


elif Admin_user_mode == "2" : #User mode

    print("*******************\n|    Welcome to user mode    |\n*******************")

    while True :

        print("\n---------------------------------------")

        print("|To view hospital's departments Enter 1 |")

        print("|To view hospital's docotrs Enter 2     |")

        print("|To view patient's details Enter 3      |")

        print("|To be Back Enter B                     |")

        print("---------------------------------------")

        UserOptions = input("Enter your choice : ")

        if UserOptions == "1" : #User mode; view hospital's departments

            print("Hospital's departments: ")

            import mysql.connector
```

```python
myconn=mysql.connector.connect(host="localhost",user="root",passwd="tanujbhatia",database="HospitalMa
nagement")

            cur=myconn.cursor()

            cur.execute("select distinct Department from doctordatabase")

            for i in cur:

                print(i)

            cur.close()

        elif UserOptions == "2" : #User mode ; view hospital's Doctors

            print("Hospital's doctors :")

            import mysql.connector

myconn=mysql.connector.connect(host="localhost",user="root",passwd="tanujbhatia",database="HospitalMa
nagement")

            cur=myconn.cursor()

            cur.execute("select Name,Department from doctordatabase")

            for i in cur:

                print(i[0],'\t',i[1])

            cur.close()

        elif UserOptions == "3" : #User mode ; view patients' details

                displaypatient()

        elif UserOptions == "B" : #Back

                break

        else :

            print("Please Enter a correct choice")

    elif Admin_user_mode=='B':

        choice=input('Are you sure you want to exit(y/n) ? ')

        if choice=='y':

            print("***********  Program closed   ************")

            print("            Thank you              ")

            break
```

```python
else :

    print("Please choice just 1 or 2")
```

Patient's table in SQL

```
mysql> use HospitalManagement;
Database changed
mysql> desc patientdatabase;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| Patient_id   | int(11)     | NO   | PRI | NULL    |       |
| Name         | varchar(50) | YES  |     | NULL    |       |
| Age          | int(11)     | YES  |     | NULL    |       |
| Gender       | varchar(10) | YES  |     | NULL    |       |
| Phone_Number | bigint(10)  | YES  |     | NULL    |       |
| Department   | varchar(10) | YES  |     | NULL    |       |
| Doctorname   | varchar(50) | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
7 rows in set (0.13 sec)

mysql> select*from patientdatabase;
+------------+-------------+------+--------+--------------+------------+---------
---------+
| Patient_id | Name        | Age  | Gender | Phone_Number | Department | Doctorn
ame         |
+------------+-------------+------+--------+--------------+------------+---------
---------+
|          1 | RashiSingh  |   32 | Female |   9985745690 | Cardiology | Dr.Arti
Kapoor      |
|          2 | LataDevi    |   54 | Female |   8809679856 | Dental     | Dr.Arun
Kumar       |
|          3 | AshishVerma |   43 | Male   |   9812564578 | Neurology  | Dr.Shik
harBajaj     |
|          4 | PariSharma  |   39 | Male   |   9231567548 | ENT        | Dr.Ashi
Khanna      |
|          5 | SeemaSharma |   35 | Female |   9814667567 | ENT        | Dr.Ashi
Khanna      |
|          6 | ShikhaJha   |   35 | Female |   9845765345 | ENT        | Dr.Ashi
Khanna      |
+------------+-------------+------+--------+--------------+------------+---------
---------+
6 rows in set (0.05 sec)
```

Doctor's table in SQL

```
mysql> desc doctordatabase;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| doctor_id    | int(11)     | NO   | PRI | NULL    |       |
| Name         | varchar(50) | YES  |     | NULL    |       |
| Phone_Number | bigint(10)  | YES  |     | NULL    |       |
| Department   | varchar(50) | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
4 rows in set (0.08 sec)

mysql> select*from doctordatabase;
+-----------+----------------+--------------+------------+
| doctor_id | Name           | Phone_Number | Department |
+-----------+----------------+--------------+------------+
|         1 | Dr.ShikharBajaj |  9844556734 | Neurology  |
|         2 | Dr.AshiKhanna  |   9844553412 | ENT        |
|         3 | Dr.ArtiKapoor  |   9843356734 | Cardiology |
|         4 | Dr.ArunKumar   |   9834568790 | Dental     |
+-----------+----------------+--------------+------------+
4 rows in set (0.00 sec)

mysql>
```

OUTPUT

```
***************************************************************************
*                    Welcome to Hospital Management System                *
***************************************************************************
-------------------------
|Enter 1 for Admin mode |
|Enter 2 for user mode  |
|Enter B to exit        |
-------------------------
Enter your mode : 1
***********************************
|      Welcome to admin mode      |
***********************************
Please enter your password : 1234
-----------------------------
|To manage patients Enter 1 |
|To manage doctors Enter 2  |
|To be back Enter B         |
-----------------------------
Enter your choice : 1
---------------------------------
|To add new patient Enter 1     |
|To display patient Enter 2     |
|To delete patient data Enter 3 |
|To edit patient data Enter 4   |
|To Back enter B                |
---------------------------------
Enter your choice : 2
Enter patient ID : 0005
 patient name               :  SeemaSharma
 patient age                :  35
 patient gender             :  Female
 patient phone number       :  9814667567
 patient's department       :  ENT
 patient is followed by doctor :  Dr.AshiKhanna
---------------------------------
|To add new patient Enter 1     |
|To display patient Enter 2     |
|To delete patient data Enter 3 |
|To edit patient data Enter 4   |
|To Back enter B                |
---------------------------------
Enter your choice : B
-----------------------------
|To manage patients Enter 1 |
|To manage doctors Enter 2  |
|To be back Enter B         |
-----------------------------
```

```
Enter your choice : B
-------------------------
|Enter 1 for Admin mode |
|Enter 2 for user mode  |
|Enter B to exit
-------------------------
Enter your mode : 2
***********************
|       Welcome to user mode      |
*********************

---------------------------------------------
|To view hospital's departments Enter 1 |
|To view hospital's docotrs Enter 2     |
|To view patient's details Enter 3      |
|To be Back Enter B                     |
---------------------------------------------
Enter your choice : 1
Hospital's departments:
('Neurology',)
('ENT',)
('Dental',)
---------------------------------------------
|To view hospital's departments Enter 1 |
|To view hospital's docotrs Enter 2     |
|To view patient's details Enter 3      |
|To be Back Enter B                     |
---------------------------------------------
Enter your choice : 2
Hospital's doctors :
Dr.ShikharBajaj          Neurology
Dr.AshiKhanna      ENT
Dr.ArunKumar       Dental

---------------------------------------------
|To view hospital's departments Enter 1 |
|To view hospital's docotrs Enter 2     |
|To view patient's details Enter 3      |
|To be Back Enter B                     |
---------------------------------------------

Enter your choice : B
-----------------------
|Enter 1 for Admin mode |
|Enter 2 for user mode  |
|Enter B to exit
-----------------------
Enter your mode : B
Are you sure you want to exit(y/n) ? y
***********    Program closed    ************
              Thank you
>>>
```