#### HOSPITAL MANAGEMENT SYSTEM

#### A MINI-PROJECT BY:

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in partial fulfillment of the award of the degree

OF

**BACHELOR OF ENGINEERING** 

IN

#### COMPUTER SCIENCE AND ENGINEERING



#### RAJALAKSHMI ENGINEERING COLLEGE, CHENNAI

An Autonomous Institute

**CHENNAI** 

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#### **BONAFIDE CERTIFICATE**

Certified that this project "HOSPITAL MANA bonafide work of "KAVISH RAGAV S-(2307 HARINARAYANA-(230701152)" who carrie supervision.	01147), KIRAN
SUBMITTED FOR PRACTICAL EXAMINATI —	ON HELD ON

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# **HEALTHPAL**

# HOSPITAL MANAGEMENT SYSTEM

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# ABSTRACT TO PROJECT

The project "Hospital Management System" includes:

- registration of patients
- storing their details into the system
- computerized billing in the pharmacy and labs.

The software has the facility to give a unique id for every patient and stores the details of every patient and the staff automatically. It includes a search facility to know the current status of each room.

User can search availability of a doctor and the details of a patient using the id.

Hospital Management System can be entered using a username and password. It is accessible

either by an administrator or receptionist. Only they can add data into the database.

The data can be retrieved easily. The interface is very user-friendly. The data are well protected for personal use and makes the data processing very fast.

Hospital Management System is powerful, flexible, and easy to use and is designed and developed to deliver real conceivable benefits to hospitals.

FRONT END: Tkinter (Python)

SERVER-SIDE SCRIPT: Python

**DATABASE:** sqlite

# SYSTEM REQUIREMENTS

## Hardware Requirements:

- Printer to print the required documents of
- the project.
- Compact Drive.
- Processor: Pentium III and above.
- RAM: 256 MB (Minimum).
- Hard-disk: 20 GB (Minimum).

#### Software Requirements:

Windows 7 or higher.

- MySQL server 5.5 OR file (as per requirement).
- Python IDLE 3.6 or higher/ Spyder (frontend)
- Microsoft Word 2010 or higher for documentation.

# BACKEND DETAILS

Database name: healthpal

## Tables in healthpal:

```
+-----+
| Tables_in_healthpal |
+-----+
| appointment
| contact_no
| employee
| patient
| treatment
```

## Table name: patient

Field	Туре	Null	Key	Default	Extra
PATIENT_ID NAME SEX BLOOD_GROUP DOB ADDRESS CONSULT_TEAM EMAIL	int varchar(20) varchar(10) varchar(5) date varchar(100) varchar(20)	NO NO NO NO NO NO NO	PRI	NULL NULL NULL NULL NULL NULL NULL NULL	

Field	Туре	Null	Key	Default	Extra
EMP_ID EMP_NAME SEX AGE DESIG SAL EXP EMAIL PHONE	varchar(10) varchar(20) varchar(10) int varchar(20) int varchar(100) varchar(20) int	NO NO NO NO NO NO NO YES	PRI	NULL NULL NULL NULL NULL NULL NULL NULL	

# Table name: employee

## Table name: appointment

+   Field	+	+   Null	+   Key	   Default	Extra
PATIENT_ID EMP_ID AP_NO AP_TIME AP_DATE description	int   varchar(10)   varchar(10)   time   date   varchar(100)	NO NO NO YES YES YES	MUL MUL PRI	NULL NULL NULL NULL NULL	

## Table name: treatment

Field	Туре	Null	Key	Default	Extra
PATIENT_ID TREATMENT TREATMENT_CODE T_COST	int   varchar(100)   varchar(30)   int	NO   NO   NO   NO	PRI	NULL NULL NULL NULL	

## Table name: contact\_no

+	+	+	+	Default	+
Field	Type	Null	Key		Extra
PATIENT_ID CONTACTNO ALT_CONTACT	int   int   int	NO NO YES	PRI	NULL NULL NULL	

# SOURCE CODE

## database.py

```
import sqlite3
conn=sqlite3.connect("SQL.db")
print("DATABASE CONNECTION SUCCESSFUL")
#conn.execute("Drop table if EXISTS PATIENT")
#c = conn.cursor()
#conn.execute("""Create table PATIENT
#
      (PATIENT_ID int(10) primary key,
      NAME VARCHAR(20) not null,
#
      SEX varchar(10) not null,
 #
      BLOOD_GROUP varchar(5) not null,
 #
  #
      DOB date not null,
      ADDRESS varchar(100) not null,
  #
      CONSULT_TEAM varchar(50) not null,
   #
      EMAIL varchar(20) not null
   #
   # )""")
```

```
print("PATIENT TABLE CREATED SUCCESSFULLY")
#conn.execute("Drop table if EXISTS CONTACT_NO")
#c = conn.cursor()
#conn.execute("""CREATE TABLE CONTACT_NO
#
      (PATIENT_ID int(10) PRIMARY KEY,
      CONTACTNO int(15) not null,
#
      ALT_CONTACT int(15),
 #
      FOREIGN KEY(PATIENT_ID) REFERENCES
PATIENT(PATIENT_ID))
  #
print("CONTACT_NO TABLE CREATED SUCCESSFULLY")
#conn.execute("Drop table if EXISTS employee")
#conn.execute("""create table employee
      (EMP_ID varchar(10) primary key,
#
      EMP_NAME varchar(20)not null,
#
 #
      SEX varchar(10) not null,
      AGE int(5) not null,
 #
      DESIG varchar(20) not null,
  #
      SAL int(10) not null,
  #
      EXP varchar(100) not null,
  #
      EMAIL varcahr(20) not null,
   #
   # PHONE int(12))""")
```

print("EMPLOYEE TABLE CREATED SUCCESSFULLY")
#conn.execute("Drop table if EXISTS TREATMENT")

```
#conn.execute("""CREATE TABLE TREATMENT
#
      (PATIENT_ID int(10) primary key,
      TREATMENT varchar(100) not null,
#
      TREATMENT CODE varchar(30) not null,
 #
      T_COST int(20) not null,
 #
      FOREIGN KEY(PATIENT_ID) REFERENCES
PATIENT(PATIENT_ID)):
  #
print("TREATMENT TABLE CREATED SUCCESSFULLY")
#conn.execute("Drop table if EXISTS MEDICINE")
#conn.execute("""CREATE TABLE MEDICINE
#
      (PATIENT_ID int(10) primary key,
      MEDICINE_NAME varchar(100) not null,
#
      M_COST int(20) not null,
 #
      M_QTY int(10) not null,
 #
      FOREIGN KEY(PATIENT ID) REFERENCES
  #
PATIENT(PATIENT_ID));
  #
print("MEDICINE TABLE CREATED SUCCESSFULLY")
#conn.execute("Drop table if EXISTS ROOM")
#conn.execute("""Create table ROOM
   # (PATIENT_ID int(10)not NULL,
    # ROOM_NO varchar(20) PRIMARY KEY,
    #ROOM TYPE varchar(10) not null,
```

```
# RATE int(10) not null,
    # DATE_ADMITTED date,
    # DATE_DISCHARGED date NULL,
    # FOREIGN KEY(PATIENT ID) REFERENCES
PATIENT(PATIENT_ID)
     #);
    # """)
print("ROOM TABLE CREATED SUCCESSFULLY")
#conn.execute("Drop table if EXISTS APPOINTMENT")
c = conn.cursor()
c.execute("""create table appointment
     (
     PATIENT_ID int(20) not null,
     EMP_ID varchar(10) not null,
     AP_NO varchar(10) primary key,
     AP_TIME time,
     AP_DATE date,
     description varchar(100),
     FOREIGN KEY(PATIENT_ID) references PATIENT(PATIENT_ID),
     FOREIGN KEY(EMP_ID) references employee(EMP_ID));""")
print("APPOINTMENT TABLE CREATED SUCCESSFULLY")
conn.commit()
conn.close()
```

## login.py

```
from tkinter import *
import tkinter.messagebox
from tkinter import ttk
from tkinter import font

from menu import Menu

def main():
   root = Tk()
   app= MainWindow(root)

#MAIN WINDOW FOR LOG IN
```

```
class MainWindow:
 def __init__(self,master):
   self.master = master
   self.master.title("HEALTHPAL")
   self.master.geometry("800x500+0+0")
   self.master.config(bg="powder blue")
   self.frame = Frame(self.master,bg="powder blue")
   self.frame.pack()
   self.Username = StringVar()
   self.Password = StringVar()
   self.lblTitle = Label(self.frame,text = """HEALTHPAL\n
Your Personal HealthCare Companion"", font="Times 20
bold",bg="powder blue",fg="black")
   self.lblTitle.grid(row = 0 .column = 0.columnspan=2.pady=40)
   #===========
   self.LoginFrame1 =
Frame(self.frame,width=400,height=80,relief="ridge",bg="cadet
blue".bd=20)
   self.LoginFrame1.grid(row=1,column=0)
   self.LoginFrame2 =
Frame(self.frame,width=400,height=80,relief="ridge",bg="cadet
blue",bd=20)
   self.LoginFrame2.grid(row=2,column=0)
   #=====LABEL AND ENTRY======
```

```
self.lblUsername =
Label(self.LoginFrame1,text="Username",font="Helvetica 14"
bold",bg="cadet blue",bd=22)
   self.lblUsername.grid(row=0,column=0)
   self.lblUsername = Entry(self.LoginFrame1,font="Helvetica 14"
bold",textvariable= self.Username,bd=2)
   self.lblUsername.grid(row=0,column=1)
   self.lblPassword = Label(self.LoginFrame1,text="Password"
",font="Helvetica 14 bold",bg="cadet blue",bd=22)
   self.lblPassword .grid(row=1,column=0)
   self.lblPassword = Entry(self.LoginFrame1,font="Helvetica 14"
bold",show="*",textvariable=self.Password,bd=2)
   self.lblPassword .grid(row=1,column=1)
   #=====BUTTONS====
   self.btnLogin = Button(self.LoginFrame2,text = "Login"
,font="Helvetica 10 bold", width =10 ,bg="powder blue",command =
self.Login_system)
   self.btnLogin.grid(row=3,column=0)
   self.btnExit = Button(self.LoginFrame2,text = "Exit",font="Helvetica"
10 bold", width =10 .bg="powder blue".command = self.Exit)
   self.btnExit.grid(row=3,column=1)
 def Login_system(self):
   S1=(self.Username.get())
   S2=(self.Password.get())
   if(S1=='admin' and S2=='1234'):
```

```
self.newWindow = Toplevel(self.master)
self.app = Menu(self.newWindow)
elif(S1=='master' and S2=='2005'):
self.newWindow = Toplevel(self.master)
self.app = Menu(self.newWindow)
else:
    tkinter.messagebox.askretrycancel("HOSPITAL MANAGEMENT
SYSTEM", "PLEASE ENTER VALID USERNAME AND PASSWORD")
def Exit(self):
self.master.destroy()
def new_window(self):
self.newWindow = Toplevel(self.master)
self.app = self.Menu(self.newWindow)
if __name__ == "__main__":
main()
```

#### menu.py

from tkinter import \*
import tkinter.messagebox
from tkinter import ttk
from tkinter import font
import sqlite3
from patient\_form import Patient
from room\_form import Room

```
from employee_form import Employee
from appointment_form import Appointment
from billing_form import Billing
conn=sqlite3.connect("SQL.db")
print("DATABASE CONNECTION SUCCESSFUL")
class Menu:
 def __init__(self,master):
   self.master = master
   self.master.title("HEALTHPAL")
   self.master.geometry("800x600+0+0")
   self.master.config(bg="cadet blue")
   self.frame = Frame(self.master,bg="cadet blue")
   self.frame.pack()
   self.lblTitle = Label(self.frame,text = "MAIN MENU", font="Helvetica"
20 bold",bg="cadet blue")
   self.lblTitle.grid(row = 0,column = 0,columnspan=2,pady=50)
   self.LoginFrame =
Frame(self.frame,width=400,height=80,relief="ridge",bg="cadet
blue",bd=20)
   self.LoginFrame.grid(row=1,column=0)
```

self.button1 = Button(self.LoginFrame,text = "1.PATIENT REGISTRATION", width =30,font="Helvetica 14 bold",bg="cadet blue",command=self.Patient\_Reg)

self.button1.grid(row=1,column=0,pady=10)

self.button2 = Button(self.LoginFrame, text="2.ROOM ALLOCATION",width =30,font="Helvetica 14 bold",bg="cadet blue",command=self.Room\_Allocation)

self.button2.grid(row=3,column=0,pady=10)

self.button3 = Button(self.LoginFrame, text="3.EMPLOYEE REGISTRATION",width =30,font="Helvetica 14 bold",bg="cadet blue",command=self.Employee\_Reg)

self.button3.grid(row=5,column=0,pady=10)

self.button4 = Button(self.LoginFrame, text="4.BOOK APPOINTMENT",width =30,font="Helvetica 14 bold",bg="cadet blue",command=self.Appointment\_Form)

self.button4.grid(row=7,column=0,pady=10)

self.button5 = Button(self.LoginFrame, text="5.PATIENT BILL",width =30,font="Helvetica 14 bold",bg="cadet blue",command=self.Billing\_Form)

self.button5.grid(row=9,column=0,pady=10)

self.button6 = Button(self.LoginFrame, text="6.EXIT",width = 30,font="Helvetica 14 bold",bg="cadet blue",command = self.Exit) self.button6.grid(row=11,column=0,pady=10)

```
#EXIT FOR MENU
 def Exit(self):
   self.master.destroy()
 def Patient_Reg(self):
   self.newWindow = Toplevel(self.master)
   self.app = Patient(self.newWindow)
 def Room_Allocation(self):
   self.newWindow = Toplevel(self.master)
   self.app = Room(self.newWindow)
 def Employee_Reg(self):
   self.newWindow = Toplevel(self.master)
   self.app = Employee(self.newWindow)
 def Appointment_Form(self):
   self.newWindow = Toplevel(self.master)
   self.app = Appointment(self.newWindow)
 def Billing_Form(self):
   self.newWindow = Toplevel(self.master)
   self.app = Billing(self.newWindow)
patient_form.py
```

# from tkinter import \* import tkinter.messagebox

```
from tkinter import ttk
from tkinter import font
import sqlite3
conn=sqlite3.connect("SQL.db")
print("DATABASE CONNECTION SUCCESSFUL")
#PATIENT FORM
class Patient:
 def __init__(self,master):
   self.master = master
   self.master.title("HOSPITAL MANAGEMENT SYSTEM")
   self.master.geometry("1500x700+0+0")
   self.master.config(bg="cadet blue")
   self.frame = Frame(self.master,bg="cadet blue")
   self.frame.pack()
   #======ATTRIBUTES======
   self.pat_ID=IntVar()
   self.pat_name=StringVar()
   self.pat_dob=StringVar()
   self.pat_address=StringVar()
```

```
self.pat_sex=StringVar()
   self.pat_BG=StringVar()
   self.pat_email=StringVar()
   self.pat_contact=IntVar()
   self.pat_contactalt=IntVar()
   self.pat_CT=StringVar()
   #=======TITLE======
   self.lblTitle = Label(self.frame,text = "PATIENT REGISTRATION"
FORM", font="Helvetica 20 bold",bg="cadet blue")
   self.lblTitle.grid(row =0 ,column = 0,columnspan=2,pady=50)
   #======FRAME======
   self.LoginFrame =
Frame(self.frame,width=400,height=80,relief="ridge",bg="cadet
blue",bd=20)
   self.LoginFrame.grid(row=1,column=0)
   self.LoginFrame2 =
Frame(self.frame,width=400,height=80,relief="ridge",bg="cadet
blue",bd=20)
   self.LoginFrame2.grid(row=2,column=0)
   #======LABELS=======
   self.lblpatid = Label(self.LoginFrame,text="PATIENT
ID",font="Helvetica 14 bold",bg="cadet blue",bd=22)
   self.lblpatid.grid(row=0,column=0)
```

```
self.lblpatid = Entry(self.LoginFrame,font="Helvetica 14"
bold".bd=2,textvariable=self.pat ID)
   self.lblpatid.grid(row=0,column=1)
   self.lblPatname = Label(self.LoginFrame,text="PATIENT
NAME",font="Helvetica 14 bold",bg="cadet blue",bd=22)
   self.lblPatname.grid(row=1,column=0)
   self.lblPatname = Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable= self.pat_name)
   self.lblPatname.grid(row=1,column=1)
   self.lblsex = Label(self.LoginFrame,text="SEX",font="Helvetica 14"
bold",bg="cadet blue",bd=22)
   self.lblsex.grid(row=2,column=0)
   self.lblsex = Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable= self.pat_sex)
   self.lblsex.grid(row=2,column=1)
   self.lbIDOB = Label(self.LoginFrame,text="DOB"
(YYYY-MM-DD)",font="Helvetica 14 bold",bg="cadet blue",bd=22)
   self.lbIDOB.grid(row=3,column=0)
   self.lbIDOB = Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable=self.pat_dob)
   self.lblDOB.grid(row=3,column=1)
   self.lblbgrp = Label(self.LoginFrame.text="BLOOD"
GROUP",font="Helvetica 14 bold",bg="cadet blue",bd=22)
```

```
self.lblbgrp.grid(row=4,column=0)
   self.lblbgrp = Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable= self.pat_BG)
   self.lblbgrp.grid(row=4,column=1)
   self.lblCon = Label(self.LoginFrame,text="CONTACT"
NUMBER",font="Helvetica 14 bold",bg="cadet blue",bd=22)
   self.lblCon.grid(row=0,column=2)
   self.lblCon = Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable= self.pat_contact)
   self.lblCon.grid(row=0,column=3)
   self.lbIAIt = Label(self.LoginFrame,text="ALTERNATE
CONTACT", font="Helvetica 14 bold", bg="cadet blue", bd=22)
   self.lblAlt.grid(row=1,column=2)
   self.lbIAIt = Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable= self.pat_contactalt)
   self.lblAlt.grid(row=1,column=3)
   self.lbleid = Label(self.LoginFrame,text="EMAIL",font="Helvetica 14"
bold",bg="cadet blue",bd=22)
   self.lbleid.grid(row=2,column=2)
   self.lbleid = Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable= self.pat_email)
   self.lbleid.grid(row=2,column=3)
```

```
self.lbldoc = Label(self.LoginFrame,text="CONSULTING TEAM /
DOCTOR", font="Helvetica 14 bold", bg="cadet blue", bd=22)
   self.lbldoc.grid(row=3,column=2)
   self.lbldoc = Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable= self.pat_CT)
   self.lbldoc.grid(row=3,column=3)
   self.lbladd =
Label(self.LoginFrame,text="ADDRESS",font="Helvetica 14"
bold".bg="cadet blue",bd=22)
   self.lbladd.grid(row=4,column=2)
   self.lbladd = Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable= self.pat_address)
   self.lbladd.grid(row=4,column=3)
   self.button2 = Button(self.LoginFrame2, text="SUBMIT",width
=10,font="Helvetica 14 bold",bg="cadet blue",command =
self.INSERT_PAT)
   self.button2.grid(row=3,column=1)
   self.button3 = Button(self.LoginFrame2, text="UPDATE",width
=10,font="Helvetica 14 bold",bg="cadet blue",command=
self.UPDATE_PAT)
   self.button3.grid(row=3,column=2)
   self.button4 = Button(self.LoginFrame2, text="DELETE",width
=10,font="Helvetica 14 bold",bg="cadet blue",command=
self.D_DISPLAY)
```

```
self.button4.grid(row=3,column=3)
   self.button5 = Button(self.LoginFrame2, text="SEARCH",width
=10,font="Helvetica 14 bold",bg="cadet blue",command=
self.S_DISPLAY)
   self.button5.grid(row=3,column=4)
   self.button6 = Button(self.LoginFrame2, text="EXIT",width
=10,font="Helvetica 14 bold",bg="cadet blue",command = self.Exit)
   self.button6.grid(row=3,column=5)
 def clear(self):
   self.lblpatid.delete(0,'end')
   self.lblPatname.delete(0,'end')
   self.lblsex.delete(0,'end')
   self.lbIDOB.delete(0,'end')
   self.lblbgrp.delete(0,'end')
   self.lblCon.delete(0,'end')
   self.lbIAlt.delete(0,'end')
   self.lbleid.delete(0,'end')
   self.lbldoc.delete(0,'end')
   self.lbladd.delete(0,'end')
```

```
#INSERT DATA IN PATIENT FORM
 def INSERT_PAT(self):
   global pp1, pp2, pp3, pp4, pp5, pp6, pp7, pp8, pp9, pp10,ce1,conn
   conn=sqlite3.connect("SQL.db")
   conn.cursor()
   p1=(self.pat_ID.get())
   p2=(self.pat_name.get())
   p3=(self.pat_sex.get())
   p4=(self.pat_BG.get())
   p5=(self.pat_dob.get())
   p6=(self.pat_contact.get())
   p7=(self.pat_contactalt.get())
   p8=(self.pat_address.get())
   p9=(self.pat_CT.get())
   p10=(self.pat_email.get())
   p = list(conn.execute("SELECT * FROM PATIENT WHERE
PATIENT_ID =?",(p1,)))
   x=len(p)
   if x!=0:
     tkinter.messagebox.showerror("HOSPITAL DATABASE
SYSTEM", "PATIENT_ID ALREADY EXISTS")
```

```
else:
     conn.execute('INSERT INTO PATIENT
VALUES(?,?,?,?,?,?)',(p1,p2,p3,p4,p5,p8,p9,p10,))
     conn.execute('INSERT OR REPLACE INTO CONTACT_NO
VALUES (?,?,?)',(p1,p6,p7,))
     tkinter.messagebox.showinfo("HOSPITAL DATABASE
SYSTEM", "DETAILS INSERTED INTO DATABASE")
     self.clear()
   conn.commit()
 #UPDATE DATA IN PATIENT FORM
 def UPDATE_PAT(self):
   global u1, u2, u3, u4, u5, u6, u7, u8, u9, u10, ue1, conn
   conn.cursor()
   u1 = (self.pat_ID.get())
   u2 = (self.pat_name.get())
   u3 = (self.pat_sex.get())
   u4 = (self.pat_dob.get())
   u5 = (self.pat_BG.get())
   u6 = (self.pat_contact.get())
   u7 = (self.pat_contactalt.get())
   u8 = (self.pat_email.get())
   u9 = (self.pat_CT.get())
   u10 = (self.pat_address.get())
   conn = sqlite3.connect("SQL.db")
```

```
p = list(conn.execute("Select * from PATIENT where PATIENT_ID=?",
(u1,)))
   if len(p) != 0:
     conn.execute('UPDATE PATIENT SET
NAME=?,SEX=?,DOB=?,BLOOD_GROUP=?,ADDRESS=?,CONSULT_TE
AM=?,EMAIL=? where PATIENT_ID=?', (u2, u3, u4, u5, u10, u9, u8,u1,))
     conn.execute('UPDATE CONTACT NO set
CONTACTNO=?,ALT_CONTACT=? WHERE PATIENT_ID=?', (u6, u7,u1,))
    tkinter.messagebox.showinfo("HOSPITAL DATABASE SYSTEM",
"DETAILS UPDATED INTO DATABASE")
    self.clear()
    conn.commit()
   else:
    tkinter.messagebox.showerror("HOSPITAL DATABSE SYSTEM",
"PATIENT IS NOT REGISTERED")
 def Exit(self):
   self.master.destroy()
 def D_DISPLAY(self):
   self.newWindow = Toplevel(self.master)
   self.app = DMenu(self.newWindow)
 def S_DISPLAY(self):
   self.newWindow=Toplevel(self.master)
   self.app = SMenu(self.newWindow)
class DMenu:
```

```
def __init__(self,master):
   global inp_d,entry1,DeleteB
   self.master = master
   self.master.title("HOSPITAL MANAGEMENT SYSTEM")
   self.master.geometry("1500x700+0+0")
   self.master.config(bg="cadet blue")
   self.frame = Frame(self.master,bg="cadet blue")
   self.frame.pack()
   self.del_pid=IntVar()
   self.lblTitle = Label(self.frame,text = "DELETE WINDOW",
font="Helvetica 20 bold",bg="cadet blue")
   self.lblTitle.grid(row =0 ,column = 0,columnspan=2,pady=50)
   #======FRAME======
   self.LoginFrame =
Frame(self.frame,width=400,height=80,relief="ridge",bg="cadet
blue".bd=20)
   self.LoginFrame.grid(row=1,column=0)
   self.LoginFrame2 =
Frame(self.frame,width=400,height=80,relief="ridge",bg="cadet
blue",bd=20)
   self.LoginFrame2.grid(row=2,column=0)
   #======LABELS=======
   self.lblpatid = Label(self.LoginFrame,text="ENTER PATIENT ID TO
DELETE", font="Helvetica 14 bold", bg="cadet blue", bd=22)
   self.lblpatid.grid(row=0,column=0)
   self.lblpatid= Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable= self.del_pid)
```

```
self.DeleteB = Button(self.LoginFrame2, text="DELETE",width
=10,font="Helvetica 14 bold",bg="cadet blue",command =
self.DELETE_PAT)
   self.DeleteB.grid(row=3,column=1)
 def DELETE_PAT(self):
   global inp_d,del_pid
   c1= conn.cursor()
   inp_d = (self.del_pid.get())
   p=list(conn.execute("select * from PATIENT where PATIENT_ID=?",
(inp_d,)))
   if (len(p)==0):
     tkinter.messagebox.showerror("HOSPITAL DATABSE
SYSTEM", "PATIENT RECORD NOT FOUND")
   else:
     conn.execute('DELETE FROM PATIENT where
PATIENT_ID=?',(inp_d,))
     tkinter.messagebox.showinfo("HOSPITAL DATABASE SYSTEM",
"DETAILS DELETED FROM DATABASE")
     conn.commit()
class SMenu:
 def __init__(self,master):
   global inp_s,s_pid,SearchB
   self.master = master
   self.master.title("HOSPITAL MANAGEMENT SYSTEM")
```

self.lblpatid.grid(row=0,column=1)

```
self.master.geometry("1500x700+0+0")
   self.master.config(bg="cadet blue")
   self.frame = Frame(self.master,bg="cadet blue")
   self.frame.pack()
   self.s_pid=IntVar()
   self.lblTitle = Label(self.frame,text = "SEARCH WINDOW",
font="Helvetica 20 bold",bg="cadet blue")
   self.lblTitle.grid(row = 0,column = 0,columnspan=2,pady=25)
   #=======FRAME======
   self.LoginFrame =
Frame(self.frame,width=400,height=80,relief="ridge",bg="cadet
blue",bd=20)
   self.LoginFrame.grid(row=1,column=0)
   self.LoginFrame2 =
Frame(self.frame,width=400,height=80,relief="ridge",bg="cadet
blue",bd=20)
   self.LoginFrame2.grid(row=2,column=0)
   #======LABELS======
   self.lblpatid = Label(self.LoginFrame,text="ENTER PATIENT ID TO
SEARCH",font="Helvetica 14 bold",bg="cadet blue",bd=22)
   self.lblpatid.grid(row=0,column=0)
   self.lblpatid= Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable= self.s_pid)
   self.lblpatid.grid(row=0,column=1)
```

```
self.SearchB = Button(self.LoginFrame2, text="SEARCH",width
=10.font="Helvetica 14 bold".bg="cadet blue".command =
self.SEARCH_PAT)
   self.SearchB.grid(row=0,column=1)
 def SEARCH_PAT(self):
   global
inp_s,s_pid,errorS,t,i,q,dis1,dis2,dis3,dis4,dis5,dis6,dis7,dis8,dis9,dis10,l
1,12,13,14,15,16,17,18,19,110
   c1=conn.cursor()
   inp_s=(self.s_pid.get())
   p=list(conn.execute('select * from PATIENT where
PATIENT_ID=?',(inp_s,)))
   if (len(p)==0):
     tkinter.messagebox.showerror("HOSPITAL DATABSE
SYSTEM", "PATIENT RECORD NOT FOUND")
   else:
     t=c1.execute('SELECT * FROM PATIENT NATURAL JOIN
CONTACT_NO where PATIENT_ID=?',(inp_s,));
     for i in t:
          self.l1 = Label(self.LoginFrame,text="PATIENT"
ID",font="Helvetica 14 bold",bg="cadet blue",bd=22)
          self.l1.grid(row=1,column=0)
          self.dis1= Label(self.LoginFrame,font="Helvetica 14"
bold",bd=2,bg="cadet blue",text=i[0])
          self.dis1.grid(row=1,column=1)
```

```
self.l2 = Label(self.LoginFrame,text="PATIENT"
NAME",font="Helvetica 14 bold",bg="cadet blue",bd=22)
           self.l2.grid(row=2,column=0)
           self.dis2=Label(self.LoginFrame,font="Helvetica 14"
bold",bd=2,bg="cadet blue",text=i[1])
           self.dis2.grid(row=2,column=1)
           self.I3 = Label(self.LoginFrame,text="SEX",font="Helvetica"
14 bold",bg="cadet blue",bd=22)
           self.I3.grid(row=3,column=0)
           self.dis3 = Label(self.LoginFrame,font="Helvetica 14"
bold",bg="cadet blue",bd=2,text=i[2])
           self.dis3.grid(row=3,column=1)
           self.I4 = Label(self.LoginFrame,text="DOB"
(YYYY-MM-DD)",font="Helvetica 14 bold",bg="cadet blue",bd=22)
           self.l4.grid(row=4,column=0)
           self.dis4= Label(self.LoginFrame,font="Helvetica 14"
bold",bg="cadet blue",bd=2,text=i[3])
           self.dis4.grid(row=4,column=1)
           self.I5 = Label(self.LoginFrame,text="BLOOD"
GROUP",font="Helvetica 14 bold",bg="cadet blue",bd=22)
          self.I5.grid(row=5,column=0)
           self.dis5 = Label(self.LoginFrame,font="Helvetica 14"
bold",bg="cadet blue",bd=2,text=i[4])
```

### self.16 = Label(self.LoginFrame,text="ADDRESS",font="Helvetica 14" bold",bg="cadet blue",bd=22) self.l6.grid(row=1,column=2) self.dis6 = Label(self.LoginFrame,font="Helvetica 14" bold",bg="cadet blue",bd=2,text=i[5]) self.dis6.grid(row=1,column=3) self.I7 = Label(self.LoginFrame,text="CONSULTING TEAM / DOCTOR",font="Helvetica 14 bold",bg="cadet blue",bd=22) self.l7.grid(row=2,column=2) self.dis7 = Label(self.LoginFrame,font="Helvetica 14" bold",bd=2,bg="cadet blue",text=i[6]) self.dis7.grid(row=2,column=3) self.18 = Label(self.LoginFrame,text="EMAIL",font="Helvetica 14" bold",bg="cadet blue",bd=22) self.l8.grid(row=3,column=2) self.dis8 = Label(self.LoginFrame,font="Helvetica 14" bold".bd=2.bg="cadet blue".text=i[7]) self.dis8.grid(row=3,column=3) self.I9 = Label(self.LoginFrame,text="CONTACT"

NUMBER",font="Helvetica 14 bold",bg="cadet blue",bd=22)

self.dis5.grid(row=5,column=1)

self.l9.grid(row=4,column=2)

self.dis9 = Label(self.LoginFrame,font="Helvetica 14
bold",bd=2,bg="cadet blue",text=i[8])

self.dis9.grid(row=4,column=3)

self.l10 = Label(self.LoginFrame,text="ALTERNATE CONTACT",font="Helvetica 14 bold",bg="cadet blue",bd=22)

self.l10.grid(row=5,column=2)

self.dis10 = Label(self.LoginFrame,font="Helvetica 14
bold",bd=2,bg="cadet blue",text=i[9])

self.dis10.grid(row=5,column=3)

#### appointment\_form.py

```
from tkinter import *
import tkinter.messagebox
from tkinter import ttk
from tkinter import font
import sqlite3
conn=sqlite3.connect("SQL.db")
print("DATABASE CONNECTION SUCCESSFUL")
class Appointment:
 def __init__(self,master):
   self.master = master
   self.master.title("HOSPITAL MANAGEMENT SYSTEM")
   self.master.geometry("1500x700+0+0")
   self.master.config(bg="cadet blue")
   self.frame = Frame(self.master,bg="cadet blue")
   self.frame.pack()
   #=======ATTRIBUTES======
   self.pat_ID=IntVar()
   self.emp_ID=StringVar()
   self.ap_no=StringVar()
```

```
self.ap_time=StringVar()
   self.ap_date=StringVar()
   self.des=StringVar()
   #========TITLE======
   self.lblTitle = Label(self.frame,text = "APPOINTMENT FORM",
font="Helvetica 20 bold",bg="cadet blue")
   self.lblTitle.grid(row = 0,column = 0,columnspan=2,pady=50)
   #======FRAME======
   self.LoginFrame =
Frame(self.frame,width=400,height=80,relief="ridge",bg="cadet
blue",bd=20)
   self.LoginFrame.grid(row=1,column=0)
   self.LoginFrame2 =
Frame(self.frame,width=400,height=80,relief="ridge",bg="cadet
blue",bd=20)
   self.LoginFrame2.grid(row=2,column=0)
   #======LABELS======
   self.lblpid = Label(self.LoginFrame.text="PATIENT"
ID",font="Helvetica 14 bold",bg="cadet blue",bd=22)
   self.lblpid.grid(row=0,column=0)
   self.lblpid = Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable= self.pat_ID)
   self.lblpid.grid(row=0,column=1)
```

```
self.lbldid = Label(self.LoginFrame,text="DOCTOR"
ID",font="Helvetica 14 bold",bg="cadet blue",bd=22)
   self.lbldid.grid(row=1,column=0)
   self.lbldid = Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable=self.emp_ID)
   self.lbldid.grid(row=1,column=1)
   self.lblap = Label(self.LoginFrame,text="APPOINTMENT"
NO",font="Helvetica 14 bold",bg="cadet blue",bd=22)
   self.lblap.grid(row=2,column=0)
   self.lblap = Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable=self.ap_no)
   self.lblap.grid(row=2,column=1)
   self.lblapt = Label(self.LoginFrame,text="APPOINTMENT
TIME(HH:MM:SS)",font="Helvetica 14 bold",bg="cadet blue",bd=22)
   self.lblapt.grid(row=0,column=2)
   self.lblapt = Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable=self.ap_time)
   self.lblapt.grid(row=0,column=3)
   self.lblapd = Label(self.LoginFrame,text="APPOINTMENT
DATE(YYYY-MM-DD)",font="Helvetica 14 bold",bg="cadet blue",bd=22)
   self.lblapd.grid(row=1,column=2)
   self.lblapd = Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable= self.ap_date)
```

```
self.lblapd.grid(row=1,column=3)
   self.lbldes =
Label(self.LoginFrame,text="DESCRIPTION",font="Helvetica 14"
bold",bg="cadet blue",bd=22)
   self.lbldes.grid(row=2,column=2)
   self.lbldes = Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable=self.des)
   self.lbldes.grid(row=2,column=3)
   self.button2 = Button(self.LoginFrame2, text="SAVE",width
=10.font="Helvetica 14 bold",bg="cadet blue",command =
self.INSERT_AP)
   self.button2.grid(row=3,column=1)
   self.button3 = Button(self.LoginFrame2, text="DELETE",width
=10,font="Helvetica 14 bold",bg="cadet blue",command=
self.DE_AP_DISPLAY)
   self.button3.grid(row=3,column=2)
   self.button3 = Button(self.LoginFrame2, text="SEARCH"
APPOINTMENTS", width = 20, font="Helvetica 14 bold", bg="cadet
blue",command= self.S_AP_DISPLAY)
   self.button3.grid(row=3,column=3)
```

```
self.button6 = Button(self.LoginFrame2, text="EXIT", width
=10.font="Helvetica 14 bold",bg="cadet blue",command = self.Exit)
   self.button6.grid(row=3,column=4)
 def Exit(self):
   self.master.destroy()
 def INSERT_AP(self):
   global e1,e2,e3,e4,e5,e6,var
   e1=(self.pat_ID.get())
   e2=(self.emp_ID.get())
   e3=(self.ap_no.get())
   e4=(self.ap_time.get())
   e5=(self.ap_date.get())
   e6=(self.des.get())
   conn = sqlite3.connect("SQL.db")
   p = list(conn.execute("SELECT * FROM appointment WHERE
AP_NO = ?",(e3,))
   x=len(p)
   if x!=0:
     tkinter.messagebox.showerror("HOSPITAL DATABSE SYSTEM",
"APPOINTMENT ALREADY EXISTS")
   else:
     conn.execute("Insert into appointment
values(?,?,?,?,?)",(e1,e2,e3,e4,e5,e6,))
```

```
tkinter.messagebox.showinfo("Hospital DATABASE SYSTEM",
"APPOINTMENT SET SUCCSESSFULLY")
   conn.commit()
 def DE_AP_DISPLAY(self):
   self.newWindow = Toplevel(self.master)
   self.app = DEL_AP(self.newWindow)
 def S_AP_DISPLAY(self):
   self.newWindow=Toplevel(self.master)
   self.app = SEA_AP(self.newWindow)
class DEL AP:
 def __init__(self,master):
   global de1_ap,de
   self.master = master
   self.master.title("HOSPITAL MANAGEMENT SYSTEM")
   self.master.geometry("1500x700+0+0")
   self.master.config(bg="cadet blue")
   self.frame = Frame(self.master,bg="cadet blue")
   self.frame.pack()
   self.de1_ap=StringVar()
   self.lblTitle = Label(self.frame,text = "DELETE APPOINTMENT
WINDOW", font="Helvetica 20 bold",bg="cadet blue")
   self.lblTitle.grid(row = 0,column = 0,columnspan=2,pady=50)
```

```
#=======FRAME======
   self.LoginFrame =
Frame(self.frame,width=400,height=80,relief="ridge",bg="cadet
blue",bd=20)
   self.LoginFrame.grid(row=1,column=0)
   self.LoginFrame2 =
Frame(self.frame.width=400,height=80,relief="ridge",bg="cadet
blue",bd=20)
   self.LoginFrame2.grid(row=2,column=0)
   #======LABELS======
   self.lblpatid = Label(self.LoginFrame,text="ENTER APPOINTMENT
NO TO DELETE", font="Helvetica 14 bold", bg="cadet blue", bd=22)
   self.lblpatid.grid(row=0,column=0)
   self.lblpatid= Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable= self.de1_ap)
   self.lblpatid.grid(row=0,column=1)
   self.DeleteB = Button(self.LoginFrame2, text="DELETE",width
=10,font="Helvetica 14 bold",bg="cadet blue",command =
self.DELETE AP)
   self.DeleteB.grid(row=3,column=1)
 def DELETE_AP(self):
   global inp_d
   inp_d = str(self.de1_ap.get())
   conn = sqlite3.connect("SQL.db")
```

```
v=list(conn.execute("select * from appointment where AP_NO=?",
(inp_d ,)))
   if (len(v)==0):
    tkinter.messagebox.showerror("HOSPITAL DATABSE SYSTEM",
"PATIENT APPOINTMENT NOT FIXED")
   else:
     conn.execute('DELETE FROM APPOINTMENT where
AP_NO=?',(inp_d,))
    tkinter.messagebox.showinfo("Hospital DATABASE SYSTEM",
"PATIENT APPOINTMENT DELETED")
   conn.commit()
class SEA AP:
 def __init__(self,master):
   global inp_s,entry,SearchB
   self.master = master
   self.master.title("HOSPITAL MANAGEMENT SYSTEM")
   self.master.geometry("1500x700+0+0")
   self.master.config(bg="cadet blue")
   self.frame = Frame(self.master,bg="cadet blue")
   self.frame.pack()
   self.entry=StringVar()
   self.lblTitle = Label(self.frame,text = "SEARCH APPOINTMENT
WINDOW", font="Helvetica 20 bold",bg="cadet blue")
   self.lblTitle.grid(row = 0,column = 0,columnspan=2,pady=25)
   #=======FRAME======
```

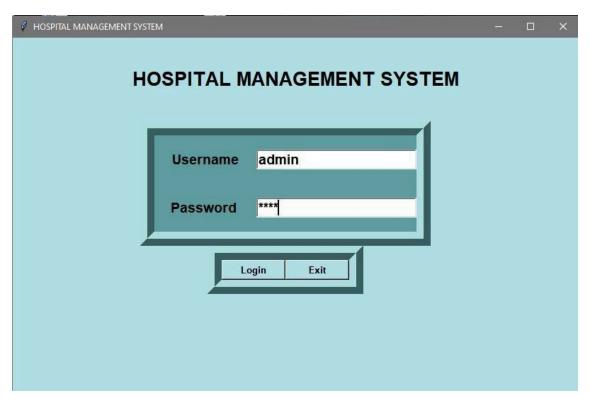
```
self.LoginFrame =
Frame(self.frame,width=400,height=80,relief="ridge",bg="cadet
blue",bd=20)
   self.LoginFrame.grid(row=1,column=0)
   self.LoginFrame2 =
Frame(self.frame,width=400,height=80,relief="ridge",bg="cadet
blue",bd=20)
   self.LoginFrame2.grid(row=2,column=0)
   #======LABELS======
   self.lblpatid = Label(self.LoginFrame,text="ENTER DATE TO VIEW"
APPOINTMENTS(YYYY-MM-DD)",font="Helvetica 14 bold",bg="cadet
blue",bd=22)
   self.lblpatid.grid(row=0,column=0)
   self.lblpatid= Entry(self.LoginFrame,font="Helvetica 14"
bold",bd=2,textvariable= self.entry)
   self.lblpatid.grid(row=0,column=1)
   self.SearchB = Button(self.LoginFrame2, text="SEARCH", width
=10,font="Helvetica 14 bold",bg="cadet blue",command =
self.SEARCH AP)
   self.SearchB.grid(row=0,column=1)
 def SEARCH_AP(self):
   global
inp_s,entry,errorS,t,i,q,dis1,dis2,dis3,dis4,dis5,dis6,dis7,dis8,dis9,dis10,l
1,12,13,14,15,16,17,18,19,110
   c1=conn.cursor()
```

```
ap=(self.entry.get())
   p = list(c1.execute("select * from appointment where AP_DATE=?",
(ap,)))
   if (len(p) == 0):
     tkinter.messagebox.showerror("HOSPITAL DATABSE
SYSTEM","NO APPOINTMENT FOR TODAY")
   else:
     t=c1.execute('SELECT
PATIENT_ID, NAME, AP_NO, EMP_ID, AP_DATE, AP_TIME FROM
PATIENT NATURAL JOIN appointment where AP_DATE=?',(ap,))
     for i in t:
       self.l1 = Label(self.LoginFrame.text="PATIENT"
ID",font="Helvetica 14 bold",bg="cadet blue",bd=22)
       self.l1.grid(row=1,column=0)
       self.dis1= Label(self.LoginFrame,font="Helvetica 14"
bold",bd=2,bg="cadet blue",text=i[0])
       self.dis1.grid(row=1,column=1)
       self.l2 = Label(self.LoginFrame,text="PATIENT"
NAME",font="Helvetica 14 bold",bg="cadet blue",bd=22)
       self.l2.grid(row=2,column=0)
       self.dis2=Label(self.LoginFrame,font="Helvetica 14"
bold",bd=2,bg="cadet blue",text=i[1])
       self.dis2.grid(row=2,column=1)
       self.13 = Label(self.LoginFrame,text="APPOINTMENT"
NO",font="Helvetica 14 bold",bg="cadet blue",bd=22)
       self.I3.grid(row=3,column=0)
```

```
self.dis3 = Label(self.LoginFrame,font="Helvetica 14"
bold".bg="cadet blue".bd=2.text=i[2])
       self.dis3.grid(row=3,column=1)
       self.I4 = Label(self.LoginFrame,text="DOCTOR"
ID",font="Helvetica 14 bold",bg="cadet blue",bd=22)
       self.l4.grid(row=4,column=0)
       self.dis4= Label(self.LoginFrame,font="Helvetica 14"
bold",bg="cadet blue",bd=2,text=i[3])
       self.dis4.grid(row=4,column=1)
       self.I5 = Label(self.LoginFrame,text="APPOINTMENT"
TIME(HH:MM:SS)",font="Helvetica 14 bold",bg="cadet blue",bd=22)
       self.I5.grid(row=5,column=0)
       self.dis5 = Label(self.LoginFrame,font="Helvetica 14"
bold",bg="cadet blue",bd=2,text=i[5])
       self.dis5.grid(row=5,column=1)
```

## **OUTPUT**

### login.py



#### menu.py

HOSPITAL MANAGEMENT SYSTEM			– – ×	- 8
PATIENT REGISTRATION FORM				
PATIENT ID	111	CONTACT NUMBER	9887454520	
PATIENT NAME	John	ALTERNATE CONTACT	9568567560	
SEX	Male	EMAIL	johnoliver@gmail.com	
DOB (YYYY-MM-DD)	1999-06-23	CONSULTING TEAM / DOCTOR	Philips	OK OK
BLOOD GROUP	B+ve	ADDRESS	Bangalore	
SL	UBMIT UPDATE	DELETE SEARCH EXI		
				In: 95
4.BOOK APPOINTMEN			NT	
5.PATIENT BILL				
6.EXIT				

## patient\_form.py



# MOTIVE

The hospital management system helps register complete patient information. It captures and stores the medical history, treatment required, details of their previous visits, upcoming appointments if any, reports, insurance details and more. It helps eliminate the need to get these details on every visit.

When patients book an appointment, Hospital Management System assigns them to the specialist available, or the one that they prefer. For assignment, it matches the patient's illness to the doctor's area of expertise.

If medical care needs to be provided at the patient's house, the system will check the doctors' availability for the remote visit. Again, the allocation happens based on availability.

Every hospital or medical institution needs to maintain records of bed availability, occupancy status of rooms with specialized care and more.

HMS collects all such information and makes it readily available whenever required. Your receptionist can easily check the information from the system and convey it to those who seek it.

Management System takes care of all activities and processes involved in managing the hospital. But, you should understand this technology is only for "Managing", the aspect of patient care is lacking in it.

Patients having episodic treatment have to be nurtured properly. The one in the OutPatient Department has to be supplied with caregiving inputs so that they can be converted into in-patient for more advanced treatment. There are various other instances as well.

# BIBLIOGRAPHY

- https://www.leadsquared.com/wha t-is-hospital-management-system/ #:~:text=The%20hospital%20man agement%20system%20helps,the se%20details%20on%20every%2 Ovisit.
- https://www.tutorialspoint.com/sqli te/index.htm
- https://www.geeksforgeeks.org/pyt hon-tkinter-tutorial/

## LIMITATIONS OF PROJECT

- 1. All the IDs and information must be remembered by the admin user for future uses.
- 2. Multiple new windows open up instead of all the operations taking up in a single window.
- 3. Some bugs (in the form of glitches) might be reported when many number of records starts to get piled up.