

# **PROJECT REPORT**

## **HOSPITAL**

### **MANAGEMENT SYSTEM**

**OBJECTIVES:**

- The project has been designed in python to display the information regarding the doctor's availability, fees, timings of 10 different departments of a hospital.
- Appointments can also be booked.
- The user can also view the appointment details.

The departments selected are:

1. Outpatient(OPD)
2. Inpatient\_Service(IP)
3. Psychology
4. Cardiology
5. ENT
6. Gastroenterology
7. Nutrition
8. Physiotherapy
9. Hematology
10. Neurology
11. Emergency

**MAIN MENU** consists of the following options

**1. View Department Information**

- The information about doctors availability, fees, timings will be displayed automatically.
- The main information is stored in an Excel file. This file is opened in Jupyter notebook through pandas read\_excel function and all its contents are transformed into a dataframe.

**2. Book an appointment**

- Book an appointment by entering the department number, patient name, age, phone number, address.
- The details are stored in a list that will be transferred to the excel file using openpyxl module.

**3. View the appointment details**

- All the appointments will be displayed from the excel file using pandas read\_excel function and dataframe.

**Software Requirements:** MS Excel 2019, Python, Jupyter Notebook

## CODE:

```
import openpyxl
import random
import pandas as pd

#Title
print("HOSPITAL MANAGEMENT SYSTEM\n".center(100))

#Departments Class
class Departments():

    # Departments Menu
    def Departments_Menu(self):
        print("\nDepartments Information\n")
        Department_Dataframe=pd.read_excel('Departments.xlsx')
        display(Department_Dataframe)

#Appointment Class
class Appointments(Departments):

    #Input Appointmnet Details
    def InputAppointmentDetails(self):
        InputArray=[]
        DepartmentID=input("\nEnter Department ID: ")
        Patient_Name=input("\nEnter Patient Name: ")
        Age=input("\nEnter Age: ")
        Phone=input("\nEnter Phone Number: ")
        Address=input("\nEnter Home Address: ")
        Date=input("\nEnter Date: ")
        Appointment_id=random.randrange(1000,5000)
        print("\nAppointment Confirmed: ",Appointment_id,'\n')
        InputArray.append(DepartmentID)
        InputArray.append(Patient_Name)
        InputArray.append(Age)
        InputArray.append(Phone)
        InputArray.append(Address)
        InputArray.append(Date)
        InputArray.append(Appointment_id)

    # Append the Array Values to the Appointment Excel sheet
    # **** Remember to Close the Appointment Excel Sheet Before Executing the code****
    AppointmentsWorkBook=openpyxl.load_workbook('Appointments.xlsx')
    sheet=AppointmentsWorkBook.active
    sheet.append(InputArray)
    AppointmentsWorkBook.save('Appointments.xlsx')
```

```

#View the Appointment Details
def ViewAppointments(self):
    print("\nAppointments Information\n")
    Appointment_Dataframe=pd.read_excel('Appointments.xlsx')
    display(Appointment_Dataframe)

# Main Menu Function (Global Function)
def MainMenu():
    print("\nMAIN MENU")
    print("1. View Department Information")
    print("2. Book an appointment")
    print('3. View the appointment details')
    print("4. Exit")
    UserOption_Main=input("\n Enter the option number: ")
    return MainMenuOperations(UserOption_Main)

def MainMenuOperations(UserChoice):
    if UserChoice=='1':
        DepartmentObject=Departments() #Object of Departments class
        DepartmentObject.Departments_Menu()
        if Continue()==False:
            return MainMenuOperations(UserChoice)

    elif UserChoice=='2':
        AppointmentObject=Appointments() #Object of Appointments class
        AppointmentObject.Departments_Menu()
        AppointmentObject.InputAppointmentDetails()
        if Continue()==False:
            return MainMenuOperations(UserChoice)

    elif UserChoice=='3':
        ViewObject=Appointments()
        ViewObject.ViewAppointments()
        if Continue()==False:
            return MainMenuOperations(UserChoice)

    elif UserChoice=='4':
        pass

    else:
        print("\nSELECT THE CORRECT OPTION\n")
        return MainMenu()

#Continue Menu (Global Function)
def Continue():
    Continue_Menu=input('Do you want to return to the Main Menu :(y/n) ')

```

```

if Continue_Menu=='y':
    return MainMenu()
elif Continue_Menu=='n':
    return False
else:
    print('Enter the correct code y/n')
    return Continue()

```

MainMenu()

## OUTPUT:

### HOSPITAL MANAGEMENT SYSTEM

#### MAIN MENU

1. View Department Information
2. Book an appointment
3. View the appointment details
4. Exit

Enter the option number: 1

#### Departments Information

Department_ID	Department_Name	Doctors_Availability	Fees	Timings
0	1 Outpatient(OPD)	5 Doctors	2000/-	24hrs/7days
1	2 Inpatient_Service(IP)	5 Doctors	1000/-	24hrs/7days
2	3 ENT	3 Doctors	2000/-	9 Am - 6Pm
3	4 Psychology	2 Doctors	2000/-	9 Am - 6Pm
4	5 Cardiology	2 Doctors	2000/-	9 Am - 6Pm
5	6 Gastroenterology	3 Doctors	2000/-	9 Am - 6Pm
6	7 Nutrition	5 Doctors	2000/-	9 Am - 6Pm
7	8 Physiotherapy	3 Doctors	2000/-	9 Am - 6Pm
8	9 Hematology	3 Doctors	2000/-	9 Am - 6Pm
9	10 Neurology	3 Doctors	2000/-	9 Am - 6Pm
10	11 Emergency	3 Doctors	2000/-	9 Am - 6Pm

Do you want to return to the Main Menu :(y/n) y

MAIN MENU

1. View Department Information
2. Book an appointment
3. View the appointment details
4. Exit

Enter the option number: 2

Departments Information

Department_ID	Department_Name	Doctors_Availability	Fees	Timings
0	1 Outpatient(OPD)	5 Doctors	2000/-	24hrs/7days
1	2 Inpatient_Service(IP)	5 Doctors	1000/-	24hrs/7days
2	3 ENT	3 Doctors	2000/-	9 Am - 6Pm
3	4 Psychology	2 Doctors	2000/-	9 Am - 6Pm
4	5 Cardiology	2 Doctors	2000/-	9 Am - 6Pm
5	6 Gastroenterology	3 Doctors	2000/-	9 Am - 6Pm
6	7 Nutrition	5 Doctors	2000/-	9 Am - 6Pm
7	8 Physiotherapy	3 Doctors	2000/-	9 Am - 6Pm
8	9 Hematology	3 Doctors	2000/-	9 Am - 6Pm
9	10 Neurology	3 Doctors	2000/-	9 Am - 6Pm
10	11 Emergency	3 Doctors	2000/-	9 Am - 6Pm

Enter Department ID: 1

Enter Patient Name: xavierina

Enter Age: 30

Enter Phone Number: 123123

Enter Home Address: Mettuguda

Enter Date: 22/05/2022

Appointment Confirmed: 2742

Do you want to return to the Main Menu : (y/n) y

MAIN MENU

1. View Department Information
2. Book an appointment
3. View the appointment details
4. Exit

Enter the option number: 3

Appointments Information

Department_ID	Patient_Name	Age	Phone_Number	Home_Address	Date	Appointment_id	
0	1	xavierina	30	123123	Mettuguda	22/05/2022	2742

Do you want to return to the Main Menu :(y/n) y

MAIN MENU

1. View Department Information
2. Book an appointment
3. View the appointment details
4. Exit

Enter the option number: 4