RYAN INTERNATIONAL SCHOOL

EXCELLENCE IN EDUCATION & ALL ROUND DEVELOPMENT

COMPUTER SCIENCE (083)
PROJECT FILE
SESSION : 2021 – 22

TITLE : HOSPITAL MANAGEMENT

NAME: VIKHYATI SINGH
CLASS: XII B
ROLL NO.:26

Submitted to
Ms. Venkatalakshmi

CERTIFICATE

This is to certify that the project entitled "HOSPITAL MANAGEMENT SYSTEM" is a precise record of work done by VIKHYATI SINGH of class XII-B for Term 2 AISSCE Examination under the guidance and supervision of Ms. Venkatalakshmi, PGT-Computer Science, Ryan International School, Ghaziabad, during the academic session 2021-22 as per the guidelines issued by CBSE.

Internal Examiner

Ms. Venkatalakshmi

ACKNOWLEDGEMENT

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Finally, I would like to express my gratitude to my beloved parents and my elder sister for their wishes and support which contributed in the successful accomplishment of my project.

VIKHYATI SINGH
XII- B

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INTRODUCTION ABOUT THE PROJECT

Our present modern information system makes use of computers for the execution, each of them connected through an optimized network. Healthcare is the most critical aspect of our society, and many health care providers face challenges to offer practical and active services to patients.

Considering a multi-speciality hospital, many people enter and exit the hospital in a day and maintaining their records safely is tedious. To reduce this type of burdens and to manage the financial, hospital administration and clinical aspects, Hospital management system came into existence.

Apart from that automating your hospital's processes and implementing them cannot be done too easily, you need an efficient hospital management system to take care of everything that is happening around the labs and hospitals.

Processing Speed and Results:

Hospital management system (HMS) follows the standard operating procedures, and there are no chances for deviation to happen in any of the effective HMS systems. With the implementation of HMS in your labs or hospitals, you will be able to treat patients with a better way and accessing their real-time reports and other information regarding the patients, and their past clinical data and more can be done quickly and lead to best patient outcomes. Hospital management system makes employees work more accessible and improve the speed of the complete processes for better results.

Cost Effective:

HMS information system helps to track and control finances, reduce leakages as well as reduce manual work and therefore there is no requirement of the higher human workforce.

Hospital management system helps to cut down the manual work done by humans in the hospitals especially for the peoples who take care of the record and documentations safely. Hospital management system helps in reducing the human resources costs as most of the work is automated.

Reduction in Errors:

Hospital management system will help in reducing different types of errors that made through interventions like missing billing, operational failure, clinical errors, cost leakages, missing appointments and much more.

Every process on the hospital management system is automated, and there are plenty of tasks provided to the software to perform without the human intervention as well as accurately, this reduces the error significantly.

If your hospital is not HMS enabled then you need to go with manual entries which involves too many human errors, so preferring HMS will make your billing section easier, faster, accurate and more transparent.

Data Security and Retrieving Ability:

In a hospital management system, they are one of the cloud-based software where everything gets interlinked, and therefore there are no chances for breaches to occur as they have high data security.

Evidence-based medicine requires the retrieving ability as well as data ability mandatorily, and this easily achieved through a hospital management system. If you have Hospital management system on your hospital, then you can easily access the operational, clinical and financial data of your hospitals.

Quality and Compliance:

Every hospital should send a report of birth, and death occurred, their reasons and related solutions to the NABH accreditation monthly. It's difficult to arrange them manually so preferring the best HMS helps you to send the reports faster and at the right time frame.

Every report is monitored and managed in the Hospital Management System carefully and efficiently for the accurate results.

Every one prefers HMS for their hospitals for coordinated and rapid care, reduced costs, reduced waiting time and readmission, enhanced patient safety and clinical care.

SOURCE CODE

```
## hospital management system
## PRINTING WELCOME NOTE
from tabulate import tabulate
def menu_fmt(x):
    x="#"+x [0:]
    for i in range(len(x)):
        if x[i]=='\n':
            x=x [: i+1] +"#"+x[1+i:]
    x=x. replace('#','\t\t\t\t')
    print(x)
while (True):
    print ("""
==========================================================================
                        WELCOME TO MEDANTA THE MEDICITY
==========================================================================
    """)
    ## creating database connectivity
    import mysql. connector
    passwd=str (input ("ENTER THE DATABASE PASSWORD;"))
    mysql=mysql. connector. connect (host="localhost", user="root", passwd=passwd)
    mycursor=mysql. cursor ()
    # Creating database
    mycursor. execute ("create database if not exists project")
    mycursor. execute ("use project")
    # Creating the tables, we need
```

```
mycursor. execute ("create table if not exists patient_details (name varchar (30) primary key, sex varchar (10), age int (3), problem varchar (50), address varchar (30), contact bigint)")

mycursor. execute ("create table if not exists doctor_details (name varchar (30) primary key, specialisation varchar (40), age int (3), contact bigint, fees int (10), monthly_salary int (10))")

mycursor. execute ("create table if not exists nurse_details (name varchar (30) primary key, age int (3), contact bigint, monthly_salary int (10))")

# Login or signup option

# Creating table for storing the username and password of the user

mycursor. execute ("create table if not exists user_data (username varchar (30) primary key, password varchar (30) default'000')")

# Printing option

while (True):

  print ("""                    1. SIGN IN (LOGIN)

                                 2. SIGN UP (REGISTER)                    """)

   r=int (input ("enter your choice:"))

   # IF USER WANTS TO REGISTER

   if r==2:

     print ("""

       ============================================================

        !!!!!!!!!!!!!!!!!!!!!!!!!!!!PLEASE REGISTER YOURSELF!!!!!!!!!!!!!!!!!!!!!!!!!!

       ============================================================    """)

     u=input ("ENTER YOUR PREFERRED USERNAME!!:")

     p=input ("ENTER YOUR PREFERRED PASSWORD (PASSWORD SHOULD BE STRONG!!!:")

     # ENTERING THE ENTERED VALUE TO THE USER_DATA TABLE

     mycursor. execute ("insert into user_data values('"+u+"','"+p+"')")

     mysql. commit ()

     print ("" ============================================================

              !!!!!!!!!!!!!!!!!!!!!!!!!!!REGISTERED SUCCESSFULLY!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

          ============================================================""")
```

```
        x=input ("enter any key to continue:")
        # IF USER WANTS TO LOGIN
        elif r==1:
        # PRINTING THE SIGNIN OPTION AGAIN TO THE USER AFTER REGISTRATION
            print ("""
==========================================================================
                !!!!!!!!!!!!!!!!!!!!!!!!!!!!!  {{SIGN IN}}!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
==========================================================================
                                        """)
            un=input ("ENTER THE USERNAME!!:")
            ps=input ("ENTER THE PASSWORD!!:")

            mycursor. execute ("select password from user_data where username='"+un+"'")
            row=mycursor. fetchall ()
            for i in row:
               a=list(i)
               if a [0] ==str(ps):
                  while (True):
                     ## displaying the task, you can perform
                     print ("""                    1. ADMINISTRATION
                                                   2. PATIENT (ADMISSION AND DISCHARGE PROCESS)
                                                   3. SIGN OUT                                  “””)
                     ## asking for the task from user
                     a=int (input ("ENTER YOUR CHOICE:"))
                     # If user wants to enter administration option
                     if a==1:
                        print ("""                 1. SHOW DETAILS
                                                   2. ADD NEW MEMBER
                                                   3. DELETE EXISTING ONE
```

```
                                    4. EXIT                                    """)
            b=int (input ("ENTER YOUR CHOICE:"))
            # Showing the existing details
            if b==1:
               print ("""          1. DOCTOR DETAILS
                                    2. NURSE DETAILS                           """)
               # ASKING USER'S CHOICE
               c=int (input ("ENTER YOUR CHOICE:"))
               # If user wants to see the details of doctors
               if c==1:
                  mycursor. execute ("select * from doctor_details")
                  row=mycursor. fetchall
                  menu_fmt (tabulate (row, headers= ["NAME", "SPECIALISATION",
"AGE",   "CONTACT", "FEES", "MONTHLY_SALARY"],tablefmt='fancy_grid'))
               # If user wants to see the details of nurses
               elif c==2:
                  mycursor. execute ("select * from nurse_details")
                  row=mycursor. fetchall ()
                  menu_fmt (tabulate (row, headers = ["NAME", "AGE", "CONTACT",
"MONTHLY_SALARY"], tablefmt='fancy_grid'))
               # IF USER WANTS TO ENTER DETAILS
            elif b==2:
               print ("""          1. DOCTOR DETAILS
                                    2. NURSE DETAILS                           """)
               c=int (input ("ENTER YOUR CHOICE:"))
               # FOR ENTERING DETAILS OF DOCTORS
               if c==1:
                # ASKING THE DETAILS
                name=input ("ENTER DR. NAME:")
                spe=input ("ENTER SPECIALISATION:")
```

```
                    age=input ("ENTER AGE:")
                    cont=input ("ENTER CONTACT NO.:")
                    fees=input ("ENTER FEES:")
                    ms=input ("ENTER MONTHLY_SALARY:")
                    # INSERTING VALUES ENTERED INTO THE DOCTORS_TABLE
                    mycursor. execute ("insert into doctor_details values ('"+name+"',
'"+spe+"', '"+age+"','"+cont+"','"+fees+"','"+ms+"')")
                    mysql. commit ()
                    print ("SUCCESSFULLY ADDED")
                    # For entering nurse details
                  elif c==2:
                    # ASKING THE DETAILS
                    name=input ("ENTER NURSE NAME:")
                    age=input ("ENTER AGE:")
                    cont=input ("ENTER CONTACT NO.:")
                    ms=int (input ("ENTER MONTHLY_SALARY:"))
                    # INSERTING VALUES ENTERED TO THE TABLE
                    mycursor.  execute ("insert into nurse_details values ('"+name+"',
'"+age+"','"+cont+"','"+str(ms)+"')")
                    mysql. commit ()
                    print ("SUCCESSFULLY ADDED")
                    # If user wants to delete data
                elif b==3:
                  print ("""          1. DOCTOR DETAILS
                                      2. NURSE DETAILS                    “””)
                  c=int (input ("ENTER YOUR CHOICE:"))
                  # Deleting doctor's details
                  if c==1:
                     name=input ("ENTER DOCTOR'S NAME:")
                     p=input ("you really want to delete this data? (y/n):")
```

```
                    if p=='y':
                        data="DELETE FROM doctor_details WHERE name='"+name+"'"
                        query=data. format(name)
                        mycursor. execute (query)
                        mysql. commit ()
                        print ("SUCCESSFULLY DELETED!!")
                        print ("""
 ================================================================
            !!!!!!!!!!!!!!!!!!!!!!!!!!!!  {{AFTER DELETION}}!!!!!!!!!!!!!!!!!!!!!!!!!!!
 ================================================================  """)
                        mycursor. execute ("select * from doctor_details")
                        row=mycursor. fetchall ()
                        menu_fmt (tabulate (row, headers= ["NAME","SPECIALISATION",
"AGE","CONTACT","FEES","MONTHLY_SALARY"], tablefmt='fancy_grid'))
                    else:
                        print ("NOT DELETED")
                # Deleting nurse details
                elif c==2:
                    name=input ("ENTER NURSE'S NAME:")
                    p=input ("you really want to delete this data? (y/n):")
                    if p=='y':
                        data="DELETE FROM nurse_details WHERE name='"+name+"'"
                        query=data. format(name)
                        mycursor. execute(query)
                        mysql. commit ()
                        print ("SUCCESSFULLY DELETED!!")
                        print ("""
================================================================
            !!!!!!!!!!!!!!!!!!!!!!!!!!!!  {{AFTER DELETION}}!!!!!!!!!!!!!!!!!!!!!!!!!!!
================================================================  """)
```

```
                    mycursor. execute ("select * from nurse_details")
                    row=mycursor. fetchall ()
                    menu_fmt (tabulate (row, headers=["NAME","AGE",
"CONTACT","MONTHLY_SALARY"], tablefmt='fancy_grid'))
                else:
                    print ("NOT DELETED")
            elif b==4:
                print ("THANK YOU")
                break
        # Entering the patient details table
        elif a==2:
            print ("""          1. SHOW PATIENT DETAILS
                               2. ADD NEW PATIENT
                               3. DISCHARGE PATIENT
                               4. EXIT                    """")
            b=int (input ("ENTER YOUR CHOICE:"))
            # Showing the existing details
            # If user wants to see the details of patient
            if b==1:
                mycursor. execute ("select * from patient_details")
                row=mycursor. fetchall ()
                menu_fmt (tabulate (row, headers= ["NAME","SEX","AGE",
"PROBLEM","ADDRESS","CONTACT"], tablefmt='fancy_grid'))
            # Adding new patient
            elif b==2:
                name=str (input ("ENTER NAME: "))
                sex=str (input ("ENTER SEX: "))
                age=str (input ("ENTER AGE: "))
                problem=str (input ("ENTER PROBLEM:"))
                address=str (input ("ADDRESS: "))
```

```
                    contact=str (input ("CONTACT NUMBER: "))
                    mycursor. execute ("insert into patient_details values('"+str(name)+"',
'"+str(sex)+"','"+str(age)+"','"+str(problem)+"','"+str(address)+"','"+str(contact)+"')")
                    mysql. commit ()
                    print ("SUCCESSFULLY ADDED")
                 # Discharge process
                elif b==3:
                    name=input ("ENTER PATIENT'S NAME:")
                    bill=input ("HAS THE PATIENT PAID ALL THE BILLS? (y/n):")
                    if bill=='y':
                        data="DELETE FROM patient_details WHERE name='"+name+"'"
                        query=data. format(name)
                        mycursor. execute(query)
                        mysql. commit ()
                        print ("SUCCESSFULLY DELETED!!")
                        print ("""
  ======================================================================
              !!!!!!!!!!!!!!!!!!!!!!!!!!!!!  {{AFTER DELETION}}!!!!!!!!!!!!!!!!!!!!!!!!!!!
  ======================================================================   """)
                        mycursor. execute ("select * from patient_details")
                        row=mycursor. fetchall ()
                        menu_fmt (tabulate (row, headers= ["NAME","SEX","AGE",
"PROBLEM","ADDRESS","CONTACT"], tablefmt='fancy_grid'))
                    else:
                        print ("BILL NOT PAID")
                        print ("NOT DELETED")
                # If user wants to exit
                elif b==4:
                    print ("THANK YOU")
                    break
```

```
### SIGN OUT
elif a==3:
   print ("SIGNED OUT")
   break
# IF THE USERNAME AND PASSWORD IS NOT IN THE DATABASE
else:
   print ("USERNAME OR PASSWORD NOT IN DATABSE")
```

OUTPUT

```
                                                    1.ADMINISTRATION
                                                    2.PATIENT (ADMISSION AND DISCHARGE PROCESS)
                                                    3.SIGN OUT


ENTER YOUR CHOICE:3
SIGNED OUT

                                                    1. SIGN IN (LOGIN)
                                                    2. SIGN UP (REGISTER)

enter your choice:
```

```
                                                1.ADMINISTRATION
                                                2.PATIENT (ADMISSION AND DISCHARGE PROCESS)
                                                3.SIGN OUT


ENTER YOUR CHOICE:2

                                                1. SHOW  PATIENT DETAILS
                                                2. ADD  NEW PATIENT
                                                3. DISCHARGE PATIENT
                                                4. EXIT

ENTER YOUR CHOICE:3
ENTER PATIENT'S NAME:MUKESH
HAS THE PATIENT PAID ALL THE BILLS ? (y/n):y
SUCCESSFULLY DELETED!!

                        ================================================================================
                        !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!  {{AFTER DELETION }}  !!!!!!!!!!!!!!!!!!!!!!!!!!!!
                        ================================================================================
```

NAME	SEX	AGE	PROBLEM	ADDRESS	CONTACT
ABHISHEK SHARMA	MALE	30	SKIN ALLERGY	GZB	9876543201
PIYA AHUJA	FEMALE	12	HIGH FEVER	NOIDA	9999111123
RITESH SHARMA	MALE	35	HEART PROBLEM	GZB	9787677745

```
ENTER YOUR CHOICE:1

                                                1. SHOW DETAILS
                                                2. ADD NEW MEMBER
                                                3. DELETE EXISTING ONE
                                                4. EXIT

ENTER YOUR CHOICE:2

                                                1. DOCTOR DETAILS
                                                2. NURSE DETAILS


ENTER YOUR CHOICE:1
ENTER DR. NAME:RATAN SINGH
ENTER SPECIALISATION:PHYSICIAN
ENTER AGE:33
ENTER CONTACT NO.:9102030556
ENTER FEES:1000
ENTER MONTHLY_SALARY:100000
SUCCESSFULLY ADDED
```

3. DISCHARGE PATIENT
4. EXIT

ENTER YOUR CHOICE:1

NAME	SEX	AGE	PROBLEM	ADDRESS	CONTACT
ABHISHEK SHARMA	MALE	30	SKIN ALLERGY	GZB	9876543201
MUKESH	MALE	45	HEAD INJURY	NOIDA	9345672310
PIYA AHUJA	FEMALE	12	HIGH FEVER	NOIDA	9999111123
RITESH SHARMA	MALE	35	HEART PROBLEM	GZB	9787677745

1.ADMINISTRATION
2.PATIENT (ADMISSION AND DISCHARGE PROCESS)
3.SIGN OUT

ENTER YOUR CHOICE:1

1. DOCTOR DETAILS
2. NURSE DETAILS

ENTER YOUR CHOICE:2

NAME	AGE	CONTACT	MONTHLY_SALARY
AHANA KHAN	33	8976543210	50000
ANANYA PANDEY	28	9753124680	35000
RIYA KAPOOR	35	9011345678	45000
SUHANI SINGH	38	9182736450	35000
SUMAN SHARMA	28	9999911223	50000

1.ADMINISTRATION
2.PATIENT (ADMISSION AND DISCHARGE PROCESS)
3.SIGN OUT

ENTER YOUR CHOICE:2

1. SHOW PATIENT DETAILS
2. ADD NEW PATIENT
3. DISCHARGE PATIENT
4. EXIT

ENTER YOUR CHOICE:1

1. DOCTOR DETAILS
2. NURSE DETAILS

ENTER YOUR CHOICE:1

NAME	SPECIALISATION	AGE	CONTACT	FEES	MONTHLY_SALARY
MANOJ SINGH	CARDIOLOGY	45	9876543210	1200	400000
PRERNA KASHYAP	CHILD SPECIALIST	32	9999451230	900	100000
RAJEEV MALHOTRA	SKIN AND HAIR	40	7654321890	1500	450000
RAJESH SINGH	NEUROLOGIST	45	9012367501	2000	500000
RITIKA KAPOOR	EYE	35	8765432190	1000	350000

1.ADMINISTRATION
2.PATIENT (ADMISSION AND DISCHARGE PROCESS)
3.SIGN OUT

ENTER YOUR CHOICE:1

1. SHOW DETAILS
2. ADD NEW MEMBER
3. DELETE EXISTING ONE
4. EXIT

==========

WELCOME TO MEDANTA THE MEDICITY

==========

ENTER THE DATABASE PASSWORD;vikhyati31

1. SIGN IN (LOGIN)
2. SIGN UP (REGISTER)

enter your choice:1

==========
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!! {{SIGN IN }} !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
==========

ENTER THE USERNAME!!:vikhyati
ENTER THE PASSWORD!!:vkt@123

1.ADMINISTRATION
2.PATIENT (ADMISSION AND DISCHARGE PROCESS)
3.SIGN OUT

ENTER YOUR CHOICE:1

1. SHOW DETAILS
2. ADD NEW MEMBER
3. DELETE EXISTING ONE
4. EXIT

MINIMUM HARDWARE REQUIREMENT-

- Laptop
- Modern Operating system-Windows 7 to Windows 10
- x86 64-bit CPU
- 4 GB RAM

MINIMUM SOFTWARE REQUIREMENT-

- Operating System
  - Windows 7 or 10
  - Mac OS X 10.11 or higher, 64 bits
  - Linux: RHEL 6/7, 64 bits
- Python Versions 3.x.x or higher
- MySQL Server 8.0, 5.7, and 5.6

REFERENCES/ BIBLIOGRAPHY-

- Text book - Class XI and XII – Computer Science with Python by Preeti Arora
- Google.com - For any online queries