HOTEL MANAGEMENT SYSTEM COMPUTER SCIENCE

## **ACKNOWLEDGEMENT**

The completion of this project largely depends on the support and instructions by others. I would like to express my sincere gratitude to all the people who conveyed their support and to the crew who helped in the completion of this project.

I express a deep sense of gratitude to The almighty God for giving my crew and me in the successful completion of the project.

I would like to indicate my heartfelt gratitude to my parents for the utmost motivation and encouragement on course of this project.

The contribution of all the crew members has been gratefully acknowledged and these contributions has played an important factor in the upbringing of this project.

I express my deep sense of gratitude to the paramount, The Principal, **Fr Sabu Koodappattu CMI**. His motivation and help played an important role in the completion of the project.

I would like to express my sincere thanks to the dignitary, The Vice Principal, **Fr Bastian Mangalathil CMI**, for his constant guidance and encouragement during this project.

I would like to sincerely thank all my teachers and the staff of The Department of Computer Science for reviewing and correcting all the errors occurred in the project.

To all the members, who have contributed to this project directly and indirectly, was vital for the success of the project. I am very thankful for their support and assistance for this project

	CONTENTS	
SI.NO	DESCRIPTION	PAGE NO.
1	INTRODUCTION	4
2	OBJECTIVES OF THE PROJECT	5
3	SOFTWARE DEVELOPMENT CYCLE	6
4	HARDWARE REQUIREMENTS	7
5	SOFTWARE REQUIREMENT	8
6	ABOUT PYTHON	9
7	ABOUT MYSQL	10
8	PROJECT DESCRIPTION	11
9	SOURCE CODE	12-16
10	OUTPUT	17-24
11	BIBILOGRAPHY	25

## INTRODUCTION

"The Hotel Management System" is a program which allows users to book rooms for their stay at the residence and store the details of the customers. It also allows the management of the hotel to view the hotel records.

This program was created with the help of Python Programming Language and MYSQL database. Modules such as pickle, random, time has been used. We had installed packages such as pip in order to connect the source code to the MYSQL database. The import mysql.connector played a role in establishing the connection.

The programs interprets a series of options in order for the customer with no foresight about programming to operate the program. The options include Inserting, Deleting, Searching, Editing and Displaying the records entered by the user. There is an option for displaying the whole records of the hotel and exporting the records to the file and printing the records from the file. This option can be accessed by authorised personnel only and thus its encrypted with password in order to access the records.

The goal of this program is to put use of the programming knowledge as well as a safe and user friendly software for the the user to use.

# **OBJECTIVES OF THE PROJECT** The objective of this project is to let the students apply the programming knowledge into a real- world situation/problem and exposed the students how programming skills helps in developing a good software. 1. Write programs utilising modern software tools. 2. Apply object oriented programming principles effectively when developing small to medium sized projects. 3. Write effective procedural code to solve small to medium sized problems. 4. Students will demonstrate a breadth of knowledge in computer science, as exemplified in the areas of systems, theory and software development. 5. Students will demonstrate ability to conduct a research or applied Computer Science project, requiring writing and presentation skills which exemplify scholarly style in computer science.

SOFTWARE DE	EVELOPMENT CYCLE
divides complex project phases. Segmenting pro	ent life cycle is a project management technique that is into fragmented, more easily managed segments or ojects allows managers to verify the successful hases before allocating resources to subsequent
implementation, design,	projects typically include initiation, planning, , development, testing, evaluation and maintenance hases may be divided differently depending on the
	n under development should be involved in reviewing se to ensure the system is being built to deliver the

HAR	DWARE REQUIR	REMENTS
1	OPERATING SYSTEM	WINDOWS 7 AND ABOVE, MAC OS CATALINA AND ABOVE
2	PROCESSOR	INTEL CORE, AMD RYZEN, APPLE SILICON (M1 & M2)
3	MOTHERBOARD	Logic Board - 3.2 GHz 8 GB/256 GB - 2020 A2338 OR Prime H410M-CS LGA 1200 OR Micro-ATX OR MSI A520M-A PRO
4	RAM	512MB+
5	HARD DISK	SATA 2.5 SSD 120+ OR MACINTOSH HD
6	STORAGE	64GB+
7	MONTOR	13 INCH OR ABOVE
8	OTHERS	KEYBOARD, MOUSE AND PRINTER

<b>SOF</b>	TWARE REQUIREMENTS WINDOWS OS OR MAC OS
2	PYTHON
3	MYSQL
4	PIP PACKAGES FOR MYSQL CONNECTOR SHOULD BE INSTALLED

# ABOUT PYTHON

PYTHON - Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together. Python's simple, easy to learn syntax emphasises readability and therefore reduces the cost of program maintenance. Python supports modules and packages, which encourages program modularity and code reuse. The Python interpreter and the extensive standard library are available in source or binary form without charge for all major platforms, and can be freely distributed.

# ABOUT MYSQL



MYSQL - MySQL is a relational database management

system. Databases are the essential data repository for all software applications. A relational database stores data in separate tables rather than putting all the data in one big storeroom. The database structure is organised into physical files optimised for speed. The logical data model, with objects such as data tables, views, rows, and columns, offers a flexible programming environment. You set up rules governing the relationships between different data fields, such as one to one, one to many, unique, required, or optional, and "pointers" between different tables. The database enforces these rules so that with a well-designed database your application never sees data that's inconsistent, duplicated, orphaned, out of date, or missing.

# **PROJECT DESCRIPTION**

This program consists of a table containing the details of 20 customers who has booked the hotel. The table holds the customers Booking ID / Customer ID, Customer name, Check IN date, Check OUT date, Room ID, price of the Booked Room, number of of days at the hotel. When the customer runs the program, a menu of 7 options are given for the customer to choose. The 7 options include -

## 1. Booking of the hotel room -

This function enables the customer to enter the details of the customer and inserts the details into the table and generates a random number for the customer's Booking Reference ID.

### 2. Cancelling the booking of a customer -

This function removes the details of the customer when the customer enters their Booking Reference ID(Customer ID)

## 3. Search for the details of a booking -

This function returns the details of the customer when the user enter the Booking Reference ID.

## 4. Edit the details of a booking -

This function asks the customers for the changes to be made in the booking and edits the details in the table.

#### 5. To display the hotel records of the entire customers -

This function displays all the records of the customers who has booked a room in the hotel. This can be accessed by entering the password only

#### 6. Exporting the list of hotel records into a file -

This function inserts all the records into a file and there after displays every record from the file. This can be accessed by entering the password only.

#### 7. Exiting the program -

This functions ends the program with a following salutation.

# **#SOURCE CODE**

import mysgl.connector as mycon

1000, 1)")

#importing mysgl connector and naming as mycon

```
#importing pickle module
import pickle
#import random module
import random
#establishing connection with MYSQL
try:
    conn=mycon.connect(host = "localhost", user = "root", password="yourpasswd")
    print("Connected")
except:
    print("Connection Error")
password1=12345678
#Establishing connection with the cursor to execute SQL statements
cur=conn.cursor()
#Creating a database and dropping the database in case the database already exists
  cur.execute("create database hotelmanagement")
  cur.execute("use hotelmanagement")
except:
     cur.execute("drop database hotelmanagement")
     cur.execute("create database hotelmanagement")
     cur.execute("use hotelmanagement")
#Creating table hotel_records to store the records of customers
cur.execute("create table HOTEL_RECORDS(Cust_ID int primary key unique, Cust_Name
varchar(40), Check IN date, Check Out date, Room ID int, Room Price int, No of Days int );")
#inserting values into the table of hotel records
cur.execute("insert into HOTEL_RECORDS values(1001, 'Thomas Shelby', '2022/10/31',
'2022/11/02', 101, 2000, 2);")
cur.execute("insert into HOTEL_RECORDS values(1002, 'Sandra
Bullock', '2022/10/31', '2022/11/01', 102, 1000, 1);")
cur.execute("insert into HOTEL_RECORDS values(1003, 'Emmanuel
Thomas', '2022/10/31', '2022/11/03', 105, 3000, 3);")
cur.execute("insert into HOTEL_RECORDS values(1004, 'Vicky Mohan', '2022/10/31', '2022/11/01',
106, 1000, 1);")
cur.execute("insert into HOTEL RECORDS values(1005, 'Andy Samberg', '2022/10/31', '2022/11/02',
107, 2000, 2)")
cur.execute("insert into HOTEL_RECORDS values(1006, 'Pravan Raj','2022/10/31','2022/11/04',
108, 4000, 4)")
cur.execute("insert into HOTEL_RECORDS values(1007, 'Scaria
Fernandes', '2022/10/31', '2022/11/02', 110, 2000, 2)")
```

cur.execute("insert into HOTEL\_RECORDS values(1008, 'Maria S','2022/10/31','2022/11/01', 120,

```
cur.execute("insert into HOTEL RECORDS values(1009, 'Albin Pinoybalakumar
M.S.K', '2022/10/31', '2022/11/03', 122, 3000, 3)")
cur.execute("insert into HOTEL RECORDS values(1010, 'Harikeshan
R.M','2022/10/31','2022/11/02', 123, 2000,2)")
cur.execute("insert into HOTEL RECORDS values(1011, 'Leo S.','2022/10/31','2022/11/01', 125,
1000, 1)")
cur.execute("insert into HOTEL_RECORDS values(1012, 'Hithesh
Vazhyamen', '2022/10/31', '2022/11/02', 130, 2000, 2)")
cur.execute("insert into HOTEL_RECORDS values(1013, 'Jefferey
Richford', '2022/10/31', '2022/11/06', 140, 6000, 6)")
cur.execute("insert into HOTEL_RECORDS values(1014, 'Samuel
Wozowski', '2022/10/31', '2022/11/02', 154, 2000,2)")
cur.execute("insert into HOTEL_RECORDS values(1015, 'Anupam Baby
Jr.', '2022/10/31', '2022/11/01', 169, 1000, 1)")
cur.execute("insert into HOTEL RECORDS values(1016, 'Mohandas
Freds', '2022/10/31', '2022/11/02', 175, 2000,2)")
cur.execute("insert into HOTEL RECORDS values(1017, 'Denny M. Greatruther
C.','2022/10/31','2022/11/01', 180, 1000, 1)")
cur.execute("insert into HOTEL_RECORDS values(1018, 'Alia Kiran', '2022/10/31', '2022/11/02', 189,
2000, 2)")
cur.execute("insert into HOTEL RECORDS values(1019, 'Inglesias Fluffy', '2022/10/31', '2022/11/02',
195, 3000, 3)")
cur.execute("insert into HOTEL_RECORDS values(1020, 'Kenny Seb.','2022/10/31','2022/11/01',
210 . 1000. 1)")
cur.execute("insert into HOTEL RECORDS values(1021, 'Rahul S.','2022/10/31','2022/11/01', 220,
1000, 1)")
#by this function we can fully enter the data given above in the SQL table
conn.commit()
def menu():
  while True:
          print("Welcome to CDE HOTEL & RECIDENCY\n")
          print("Choose one of the following options -- \n")
          print("Press 1 -- To Book for a Hotel Room ")
          print("Press 2 -- To Cancel a Booking")
         print("Press 3 -- To Search you booking")
         print("Press 4 -- To Edit the booking ")
         print("Press 5 -- To find the Hotel Records of Customers (FOR AUTHORISED
PERSONNEL ONLY)")
          print("Press 6 -- To Export the list of Hotel Records (FOR AUTHORISED PERSONNEL
ONLY)")
         print("Press 7 -- To Exit from this program\n")
          c=int(input("Enter your Choice -- "))
         if c==1:
            Book_Room()
          elif c == 2:
            Cancel Room()
          elif c == 3:
            Search Book()
          elif c == 4:
            Edit_Book()
          elif c == 5:
            Display_Record()
          elif c == 6:
            export_record()
          elif c == 7:
```

```
print("Are you sure you want to leave?\n")
            dc=input("Press enter to conitinue.\n")
            print("THANK YOU FOR VISITING CDE HOTELS, HOPE YOU HAD A WONDERFUL
            TIME")
            break
         else:
            print("Invalid Choice")
def Book_Room():
  try:
    Cust_ID=random.randint(1000,10000)
    Name=input("Please ENTER your name -- ")
    Check in=input("Enter the CHECK-IN date (Format - YYYY/MM/DD -- ")
    Check out=input("Enter the CHECK-OUT date (Format - YYYY/MM/DD -- ")
    Room Id=int(input("Enter the Room ID you choose -- "))
    Days Stay=int(input("Enter the Number of days you are staying -- "))
    Room Price=Days Stay*1000
    listing=(Cust_ID, Name, Check_in, Check_out, Room_Id, Room_Price, Days_Stay)
    co="insert into Hotel_Records values(%s,%s,%s,%s,%s,%s,%s,%s)"
    cur.execute(co,listing)
    conn.commit()
    print()
    print(" Please wait, your booking is processsing....")
    print()
    import time
    time.sleep(3)
    print(" **CUSTOMER DETAILS ADDED SUCCESSFULLY** ")
    print(" GOING BACK TO MENU...\n")
    time.sleep(2)
    print()
    menu()
  except:
    mycon.error
    Cust_ID=random.randint(1000,10000)
def Cancel Room():
    q="delete from hotel_records where Cust_ID=%s"
    cur.execute('select * from hotel_records')
    data=cur.fetchall()
    while True:
       uid=int(input('Enter the customer id:'))
       t=(uid,)
       for row in data:
         if uid==row[0]:
            cur.execute(q,t)
            conn.commit()
            print()
            print(" Successfully cancelled Booking")
            print()
            print(" GOING BACK TO MENU...\n")
            import time
           time.sleep(1)
            return
```

```
else:
            continue
         print('Invalid customer id!')
def Search_Book():
          while True:
               Id=int(input("Enter the Booking ID you want to search for -- "))
               df="select Cust_ID, Cust_Name, Check_IN, Check_Out from hotel_records where
Cust_ID=%s;"
               cur.execute(df,da)
               data=cur.fetchall()
               for row in data:
                    if row[0]==Id:
                         print()
                         print("Please wait.... Fetching Result")
                         import time
                         time.sleep(2)
                         print("Customer ID -- ", row[0],
                             " Customer Name -- ", row[1],
                             "Check-IN Date -- ", row[2],
                             "Check-OUT Date -- ", row[3])
                         print()
                         fdr=input("Press Enter to return to Menu\n")
                         print(" GOING BACK TO MENU...\n")
                         import time
                         time.sleep(2)
                         return()
                    else:
                         pass
               print("Booking ID doesn't exist")
def Edit_Book():
     while True:
          Id=int(input("Enter your Customer id -- "))
          cur.execute('select * from hotel_records')
          data=cur.fetchall()
          for row in data:
               if row[0]==Id:
                    print("Customer ID - ",row[0],"Name - ", row[1], "Check_IN - ", row[2],
                    "Check_Out - ",row[3], "Room ID - ",row[4], "Room Price - ", row[5],
                        "No of days of stay - ", row[6])
                    print("Enter the new changes in the Booking")
                    name=input("Enter the new name -- ")
                    chck_in=input("Enter the check in date in the format (YYYY,MM,DD)")
                    chck_out=input("Enter the check out date in the format (YYYY,MM,DD)")
                    room_id1=int(input("Enter the room ID to be changed"))
                    days=int(input("Enter the No. of days to stay -- "))
                    room_price=days*1000
                    cst_id=Id
                    klist=(name, chck_in, chck_out, room_id1, room_price, days,cst_id)
```

```
cj="update hotel_records set Cust_Name=%s, Check_IN=%s, Check_Out=%s,
                   Room ID=%s, Room Price=%s, No of Days=%s where Cust ID=%s"
                   cur.execute(ci.klist)
                   conn.commit()
                   print()
                   print("The Booking has been successfully edited\n")
                   print(" GOING BACK TO MENU...\n")
                   import time
                   time.sleep(2)
                   return
def Display_Record():
     passw=int(input("Enter the password to continue:"))
     if passw==password1:
          print("Successfully Authorised")
          cur.execute("select * from hotel_records")
          data=cur.fetchall()
          print()
          print("Printng Records....")
          print()
          import time
          time.sleep(3)
          for row in data:
               list(row)
               time.sleep(.1)
               print(" ",row,"\n")
     else:
          print()
          print("Password incorrect\n")
          print("GOING BACK TO MENU")
          import time
          time.sleep(1)
def export_record():
  passw=int(input("Enter the password to continue:"))
  bfile=open('hotelmanagement.dat','wb')
  cur.execute('select * from hotel_records')
  data=cur.fetchall()
  for i in data:
     k=list(i)
     pickle.dump(k,bfile)
  print('\nHotel Records successfully exported to File!')
  bfile.close()
  try:
     bfile=open('hotelmanagement.dat','rb')
     print('\nHOTEL RECORDS IN EXPORTED FILE\n')
     while True:
        g=pickle.load(bfile)
       print(" Customer ID -- ", g[0] ," Customer Name : ", g[1] ,"Check_IN -- " , g[2] ,
    "Check_Out -- " , g[3], "Room_ID -- ", g[4], "Room_Price -- ", g[5], "No_of_Days", g[6])
  except EOFError:
     pass
menu()
```

# **OUTPUT**

## THE MENU OF THE PROGRAM -

```
Connected
Welcome to CDE HOTEL & RECIDENCY

Choose one of the following options —

Press 1 — To Book for a Hotel Room
Press 2 — To Cancel a Booking
Press 3 — To Search you booking
Press 4 — To Edit the booking
Press 5 — To find the Hotel Records of Customers (FOR AUTHORISED PERSONNEL ONLY)
Press 6 — To Export the list of Hotel Records (FOR AUTHORISED PERSONNEL ONLY)
Press 7 — To Exit from this program

Enter your Choice —
```

#### TO ENTER THE DETAILS TO INSERT INTO THE TABLE -

```
Welcome to CDE HOTEL & RECIDENCY

Choose one of the following options —

Press 1 — To Book for a Hotel Room
Press 2 — To Cancel a Booking
Press 3 — To Search you booking
Press 4 — To Edit the booking
Press 5 — To find the Hotel Records of Customers (FOR AUTHORISED PERSONNEL ONLY)
Press 6 — To Export the list of Hotel Records (FOR AUTHORISED PERSONNEL ONLY)
Press 7 — To Exit from this program

Enter your Choice — 1
Please ENTER your name — Connie
Enter the CHECK—IN date (Format — YYYY/MM/DD — 2022/12/12
Enter the CHECK—OUT date (Format — YYYY/MM/DD — 2022/12/22
Enter the Room ID you choose — 245
Enter the Number of days you are staying — 10

Please wait, your booking is processing....

**CUSTOMER DETAILS ADDED SUCCESSFULLY***

GOING BACK TO MENU...
```

## TO REMOVE THE DETAILS FROM A TABLE -

```
Welcome to CDE HOTEL & RECIDENCY

Choose one of the following options —

Press 1 — To Book for a Hotel Room

Press 2 — To Cancel a Booking

Press 3 — To Search you booking

Press 4 — To Edit the booking

Press 5 — To find the Hotel Records of Customers (FOR AUTHORISED PERSONNEL ONLY)

Press 6 — To Export the list of Hotel Records (FOR AUTHORISED PERSONNEL ONLY)

Press 7 — To Exit from this program

Enter your Choice — 2

Enter the customer id:1012

Successfully cancelled Booking

GOING BACK TO MENU...
```

## TO SEARCH A RECORD FROM THE TABLE -

```
Welcome to CDE HOTEL & RECIDENCY

Choose one of the following options —

Press 1 — To Book for a Hotel Room
Press 2 — To Cancel a Booking
Press 3 — To Search you booking
Press 4 — To Edit the booking
Press 5 — To find the Hotel Records of Customers (FOR AUTHORISED PERSONNEL ONLY)
Press 6 — To Export the list of Hotel Records (FOR AUTHORISED PERSONNEL ONLY)
Press 7 — To Exit from this program

Enter your Choice — 3
Enter the Booking ID you want to search for — 6649

Please wait.... Fetching Result
Customer ID — 6649 Customer Name — Connie Check—IN Date — 2022—12—12 Check—OUT Date — 2022—12—22

Press Enter to return to Menu

GOING BACK TO MENU...
```

## TO EDIT A RECORD AND INPUT IT INTO THE TABLE -

```
Welcome to CDE HOTEL & RECIDENCY

Choose one of the following options —

Press 1 — To Book for a Hotel Room
Press 2 — To Cancel a Booking
Press 3 — To Search you booking
Press 3 — To Search you booking
Press 5 — To find the Hotel Records of Customers (FOR AUTHORISED PERSONNEL ONLY)
Press 6 — To Export the list of Hotel Records (FOR AUTHORISED PERSONNEL ONLY)
Press 7 — To Exit from this program

Enter your Choice — 4
Enter your Customer id — 6649
Customer ID — 6649 Name — Connie Check_IN — 2022—12—12 Check_Out — 2022—12—22 Room ID — 245 Room Price — 10000 No of days of stay — 10
Enter the new name — Sophia
Enter the new name — Sophia
Enter the check in date in the format (YYYY,MM,DD)2022/12/28
Enter the check out date in the format (YYYY,MM,DD)2022/12/30
Enter the room ID to be changed123
Enter the No. of days to stay — 2

The Booking has been successfully edited

GOING BACK TO MENU...
```

#### TO PRINT ALL THE RECORDS FROM THE TABLE -

```
Enter your Choice -- 5
Enter the password to continue:12345678
Successfully Authorised
Printng Records....
  (1001, 'Thomas Shelby', datetime.date(2022, 10, 31), datetime.date(2022, 11, 2), 101, 2000, 2)
  (1002, 'Sandra Bullock', datetime.date(2022, 10, 31), datetime.date(2022, 11, 1), 102, 1000, 1)
  (1003, 'Emmanuel Thomas', datetime.date(2022, 10, 31), datetime.date(2022, 11, 3), 105, 3000, 3)
  (1004, 'Vicky Mohan', datetime.date(2022, 10, 31), datetime.date(2022, 11, 1), 106, 1000, 1)
  (1005, 'Andy Samberg', datetime.date(2022, 10, 31), datetime.date(2022, 11, 2), 107, 2000, 2)
  (1006, 'Pravan Raj', datetime.date(2022, 10, 31), datetime.date(2022, 11, 4), 108, 4000, 4)
  (1007, 'Scaria Fernandes', datetime.date(2022, 10, 31), datetime.date(2022, 11, 2), 110, 2000, 2)
  (1008, 'Maria S', datetime.date(2022, 10, 31), datetime.date(2022, 11, 1), 120, 1000, 1)
  (1009, 'Albin Pinoybalakumar M.S.K', datetime.date(2022, 10, 31), datetime.date(2022, 11, 3), 122, 3000, 3)
  (1010, 'Harikeshan R.M', datetime.date(2022, 10, 31), datetime.date(2022, 11, 2), 123, 2000, 2)
  (1011, 'Leo S.', datetime.date(2022, 10, 31), datetime.date(2022, 11, 1), 125, 1000, 1)
  (1013, 'Jefferey Richford', datetime.date(2022, 10, 31), datetime.date(2022, 11, 6), 140, 6000, 6)
  (1014, 'Samuel Wozowski', datetime.date(2022, 10, 31), datetime.date(2022, 11, 2), 154, 2000, 2)
  (1015, 'Anupam Baby Jr.', datetime.date(2022, 10, 31), datetime.date(2022, 11, 1), 169, 1000, 1)
  (1016, 'Mohandas Freds', datetime.date(2022, 10, 31), datetime.date(2022, 11, 2), 175, 2000, 2)
  (1017, 'Denny M. Greatruther C.', datetime.date(2022, 10, 31), datetime.date(2022, 11, 1), 180, 1000, 1)
  (1018, 'Alia Kiran', datetime.date(2022, 10, 31), datetime.date(2022, 11, 2), 189, 2000, 2)
  (1019, 'Inglesias Fluffy', datetime.date(2022, 10, 31), datetime.date(2022, 11, 2), 195, 3000, 3)
  (1020, 'Kenny Seb.', datetime.date(2022, 10, 31), datetime.date(2022, 11, 1), 210, 1000, 1)
  (1021, 'Rahul S.', datetime.date(2022, 10, 31), datetime.date(2022, 11, 1), 220, 1000, 1)
  (5561, 'denny', datetime.date(2022, 12, 13), datetime.date(2022, 12, 14), 231, 1000, 1)
  (6649, 'Sophia', datetime.date(2022, 12, 28), datetime.date(2022, 12, 30), 123, 2000, 2)
```

22 / 25

#### EXPORT ALL THE RECORDS INTO A FILE AND DISPLAY IT -



