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HOTEL RESERVATION SYSTEM

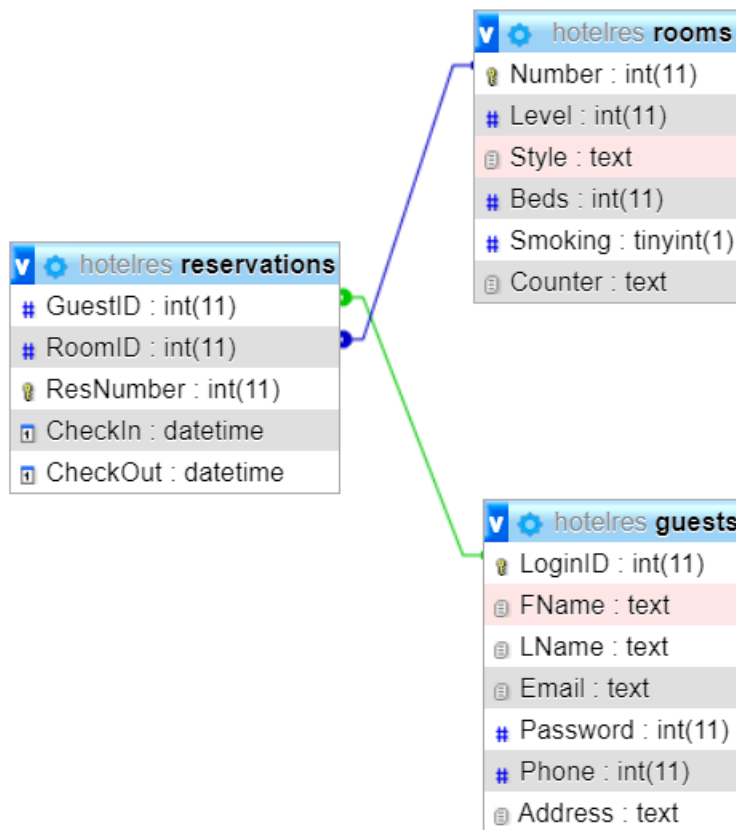
We are doing our project in python programming language and we are using Pymysql database. Firstly we have decided database schema and we have been created the database which is called 'hotelres'.

Then, we applied some database command to create our tables.

```
CREATE TABLE `guests` (
  `LoginID` int(11) NOT NULL AUTO_INCREMENT,
  `FName` text NOT NULL,
  `LName` text NOT NULL,
  `Email` text NOT NULL,
  `Password` int(11) NOT NULL,
  `Phone` int(11) NOT NULL,
  `Address` text DEFAULT NULL,
  PRIMARY KEY (`LoginID`)
) ENGINE=InnoDB AUTO_INCREMENT=29 DEFAULT CHARSET=utf8mb4
```

```
CREATE TABLE `rooms` (
  `Number` int(11) NOT NULL AUTO_INCREMENT,
  `Level` int(11) DEFAULT NULL,
  `Style` text DEFAULT NULL,
  `Beds` int(11) DEFAULT NULL,
  `Smoking` tinyint(1) DEFAULT NULL,
  `Counter` text DEFAULT NULL,
  PRIMARY KEY (`Number`)
) ENGINE=InnoDB AUTO_INCREMENT=20 DEFAULT CHARSET=utf8mb4
```

```
CREATE TABLE `reservations` (
  `GuestID` int(11) NOT NULL,
  `RoomID` int(11) NOT NULL,
  `ResNumber` int(11) NOT NULL AUTO_INCREMENT,
  `CheckIn` datetime DEFAULT NULL,
  `CheckOut` datetime DEFAULT NULL,
  PRIMARY KEY (`ResNumber`),
  KEY `GuestID` (`GuestID`),
  KEY `RoomID` (`RoomID`),
  CONSTRAINT `reservations_ibfk_1` FOREIGN KEY (`GuestID`) REFERENCES `guests` (`LoginID`),
  CONSTRAINT `reservations_ibfk_3` FOREIGN KEY (`RoomID`) REFERENCES `rooms` (`Number`)
) ENGINE=InnoDB AUTO_INCREMENT=54 DEFAULT CHARSET=utf8mb4
```



We added the data in our database. We used this sql command:

```
sqlQuery = "CREATE TABLE IF NOT EXISTS guests( LoginID INT PRIMARY KEY, Password INT NOT NULL, FName TEXT NOT NULL, LName TEXT NOT NULL, Email TEXT NOT NULL, Phone INT NOT NULL, Address TEXT)"
sqlQuery2 = "CREATE TABLE IF NOT EXISTS rooms(Number INT PRIMARY KEY , Level INT , Style TEXT, Beds INT,Smoking BOOLEAN) "
sqlQuery3 = "CREATE TABLE IF NOT EXISTS reservations(ResNumber INT PRIMARY KEY, CheckIn DATETIME, CheckOut DATETIME,GuestID INT)"

cursor.execute(sqlQuery)
cursor.execute(sqlQuery2)
cursor.execute(sqlQuery3)
```

This sql command helped us to create table and we added data in these tables.



After this, to user login, we used some commands to send data in our data table which we created before.

Firstly, we asked guests name, surname, password etc.

```
Fname = input("Ad: ")
Lname = input("Soyad: ")
Email = input("Email: ")
Password = input("Parola: ")
Phone = input("Telefon: ")
Address = input("Adres: ")
print("Başarıyla kayıt oldunuz.")
print("Kullanıcı Adı: " +Email, "Parola: " +Password)
sorgu = "INSERT INTO guests (Fname,Lname,Email>Password,Phone,Address)
VALUES (%s,%s,%s,%s,%s,%s)"

cursor.execute(sorgu,(Fname,Lname,Email>Password,Phone,Address))

connection.commit()
```

			LoginID	FName	LName	Email	Password	Phone	Address
<input type="checkbox"/>				21	yagmur sezen	demir	yagmursezendemir@gmail.com	123456	564 adana
<input type="checkbox"/>				27	2	2	2	2	2
<input type="checkbox"/>				30	Bernur	Ancel	bernurancel@gmail.com	123456	90535 adana
<input type="checkbox"/>				31	Berfin	Gökmen	berfingokmen@gmail.com	132	2147483647 adana
<input type="checkbox"/>				32	berfin merve	asile	bma@gmail.com	123456	2147483647 adana

When these commands executed, the user registered the system. After that we wanted to login these users in system, so for we get data in database, we used these commands:

```
Email = input("Email: ")
Password = input("Parola: ")
connection = pymysql.connect(host = "localhost" , user = "root" , password
= "" , db = "hotelres",port = 3306, cursorclass = pymysql.cursors.DictCursor)
try:
    with connection.cursor() as cursor:
        findemail = "SELECT * FROM guests WHERE Email = %s"
        findpassword = "Select * from guests where Password = %s"

        cursor.execute(findemail,(Email,))
        cursor.execute(findpassword,(Password,))

        result = cursor.fetchall()
        if result:
            print("Hoşgeldiniz.")
        else:
            print("Kullanıcı adı veya şifre yanlış.")

    connection.commit()
```

After that, if guest wants to reserve an hotel room, the function is called. Then we get data in database system to see hotel rooms information

```
try:
    with connection.cursor() as cursor:
        cursor.execute("SELECT * FROM rooms WHERE Counter = 'Boş'")
        rooms = cursor.fetchall()
        for i in rooms:
            print("ODA NO: " + str(i['Number']) + " DÜZEY: " + str(i['Level']) + " STİL: " + i['Style'] + " YATAK SAYISI: " + str(i['Beds']) + " SİGARA: " + str(i['Smoking']) + " DURUM: " + i['Counter'])
            print("-----")
        connection.commit()
finally:
    connection.close()
```

<div><div><div>←</div><div>T</div><div>→</div></div><div></div></div>						Number	Level	Style	Beds	Smoking	Counter
<div><div><div></div></div><div><div><div></div></div><div>Düzenle</div></div><div><div><div></div></div><div>Kopyala</div></div><div><div><div></div></div><div>Sil</div></div></div> <td>9</td> <td>1</td> <td>Suit</td> <td>1</td> <td>1</td> <td>Boş</td>	9	1	Suit	1	1	Boş					
<div><div><div></div></div><div><div><div></div></div><div>Düzenle</div></div><div><div><div></div></div><div>Kopyala</div></div><div><div><div></div></div><div>Sil</div></div></div> <td>10</td> <td>2</td> <td>Suit</td> <td>2</td> <td>1</td> <td>Dolu</td>	10	2	Suit	2	1	Dolu					
<div><div><div></div></div><div><div><div></div></div><div>Düzenle</div></div><div><div><div></div></div><div>Kopyala</div></div><div><div><div></div></div><div>Sil</div></div></div> <td>11</td> <td>3</td> <td>Normal</td> <td>3</td> <td>1</td> <td>Dolu</td>	11	3	Normal	3	1	Dolu					
<div><div><div></div></div><div><div><div></div></div><div>Düzenle</div></div><div><div><div></div></div><div>Kopyala</div></div><div><div><div></div></div><div>Sil</div></div></div> <td>12</td> <td>4</td> <td>Normal</td> <td>3</td> <td>0</td> <td>Boş</td>	12	4	Normal	3	0	Boş					
<div><div><div></div></div><div><div><div></div></div><div>Düzenle</div></div><div><div><div></div></div><div>Kopyala</div></div><div><div><div></div></div><div>Sil</div></div></div> <td>13</td> <td>5</td> <td>Normal</td> <td>3</td> <td>0</td> <td>Boş</td>	13	5	Normal	3	0	Boş					

```
Number = input("Rezervasyon için oda numarası giriniz: ")
connection = pymysql.connect(host = "localhost" , user = "root" , password
= "" , db = "hotelres",port = 3306, cursorclass = pymysql.cursors.DictCursor)
try:
    with connection.cursor() as cursor:
        findroom = "Select * from rooms where Number = %s"
        cursor.execute(findroom,(Number,))
        result = cursor.fetchall()
        if result:
            rezervasyonyap()
        else:
            print("Böyle bir oda bulunmamaktadır. ")
            odagoster()
            rezervasyonyap()

    connection.commit()
finally:
    connection.close()
```

After the guest see the rooms information, if guests want to reserve, it is necessary to enter their username and room number which they want to reserve. After that the guest could reserve in our system.

+ Seçenekler

				GuestID	RoomID	ResNumber	CheckIn	CheckOut
<input type="checkbox"/>	Düzenle	Kopyala	Sil	27	10	49	NULL	NULL
<input type="checkbox"/>	Düzenle	Kopyala	Sil	27	11	50	NULL	NULL

☐ Tümünü işaretle
 Seçilileri:
 Düzenle
 Kopyala
 Sil
 Dışa aktar

Finally, different people can not reserve same room at the same time, to prevent this situation, we applied some sql commands and if else statement.

```
def rezervasyonyap():
    connection = pymysql.connect(host = "localhost" , user = "root" , password
    = "" , db = "hotelres",port = 3306, cursorclass = pymysql.cursors.DictCursor)

    try:
        with connection.cursor() as cursor:
            Number = input("Rezervasyon için oda numarası giriniz: ")
            findroom = "Select * from rooms where Number = %s"
            cursor.execute(findroom,(Number,))
            result = cursor.fetchall()

            sorgu2 = "SELECT RoomID FROM reservations WHERE RoomID = %s"
            cursor.execute(sorgu2,(Number,))
            result2 = cursor.fetchall()
            if result2:
                print("BU ODA ALINAMAZ")
                print("Boş odalara dönüş yapılıyor")
                print("\n")
                time.sleep(2)
                odagoster()
                rezervasyonyap()
            else:
                if result:

                    Kullanici = input("Onaylamak için kullanıcı adınızı girini
z: ")

                    sorgu = "SELECT * FROM guests WHERE Email = %s"
                    cursor.execute(sorgu,(Kullanici,))
                    result = cursor.fetchall()
                    if result:
```

```

        sorgu = "INSERT INTO reservations (GuestID,RoomID) SELECT LoginID,Number FROM guests,rooms WHERE Email = %s and Number = %s "
        #sorgu = "INSERT INTO reservations (GuestID,RoomID,CheckIn,CheckOut) SELECT LoginID,Number FROM guests,rooms WHERE Email = %s and Number = %s,TO_DATE('year-month-day', 'YYYY-MM-DD'),TO_DATE('year2-month2-day2', 'YYYY-MM-DD') "
        cursor.execute(sorgu,(Kullanici,Number))

        update = "UPDATE rooms SET Counter = 'Dolu' WHERE Number = %s"
        cursor.execute(update,(Number,))

        time.sleep(2)
        print("Rezervasyon tamamlanmıştır")

    else:
        print("Kullanıcı adı yanlış")
        print("Boş olan odalarımıza dönüyorsunuz")
        time.sleep(2)
        odagoster()
        rezervasyonyap()

    connection.commit()
finally:
    connection.close()

```

To check out in the system, this will be asked the guest. If the user checkout an hotel room, their information will be deleted our system. When the guest checkout the room will be empty and the other guests will can see this room.

```

def rezervasyonsil():
    connection = pymysql.connect(host = "localhost" , user = "root" , password = "" , db = "hotelres",port = 3306, cursorclass = pymysql.cursors.DictCursor)
    try:
        with connection.cursor() as cursor:
            room = input("Çıkış yapmak için oda numaranızı giriniz: ")
            findemail = "SELECT * FROM reservations WHERE RoomID = %s"
            cursor.execute(findemail,(room,))
            result = cursor.fetchall()
            if result:
                sql = "DELETE FROM reservations WHERE RoomID = %s "
                cursor.execute(sql,(room,))

```

```

        time.sleep(2)
        print("Çıkış işlemi tamamlandı. ")
        update = "UPDATE rooms SET Counter = 'Boş' WHERE Number = %s"
        cursor.execute(update, (room,))

        connection.commit()
    finally:

```

Functional Independence: This independence means being independent, not interfering and not interfering in the relationship between the senior management responsible for management and the internal auditors responsible for the audit.

There is functional independence in our database.

Because different people can not reserve same room at the same time, to prevent this situation, we applied some sql commands and if else statement.

```

İseçiniz: 3

          BOŞ OLAN ODALARIMIZ

ODA NO: 12 DÜZEY: 4 STİL: Normal YATAK SAYISI: 3 SİGARA: 0 DURUM: Boş
-----
ODA NO: 13 DÜZEY: 5 STİL: Normal YATAK SAYISI: 3 SİGARA: 0 DURUM: Boş
-----

Rezervasyon için oda numarası giriniz: 11
BU ODA ALINAMAZ
Boş odalara dönüş yapılıyor

ODA NO: 12 DÜZEY: 4 STİL: Normal YATAK SAYISI: 3 SİGARA: 0 DURUM: Boş
-----
ODA NO: 13 DÜZEY: 5 STİL: Normal YATAK SAYISI: 3 SİGARA: 0 DURUM: Boş
-----
PS C:\Users\Yağmur Sezen Demir\Desktop\deneme>

```

And There is no problem when someone buys a new room or deletes a record in our database.

```

İşlem Seçiniz. 2
Email: 2
Parola: 2
Hoşgeldiniz.

          3- ODA ARA VE REZERVASYON YAP
          4- ODADAN AYRIL

İseçiniz: 4
Çıkış yapmak için oda numaranızı giriniz: 9
Çıkış işlemi tamamlandı.

```