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I'm amazed at how in order for a website to function and a business to run code is needed in both fields. While constructing this project I learned valuable skills such as making sure everything is correctly connected to one another. Before I could start my project I needed to be sure I had everything installed such as python and the connector in order for it to connect to mysql. After downloading and installing python the command wouldn't recognize it. I resolved this by deleting the python I have installed from the website and asked the command prompt where I would be able to download python. Luckily it directed me to the store on my pc. At first I was

```
10 • create table reservations (  
11     reservationId int not null primary key auto_increment,  
12     customerId int not null,  
13     reservationTime datetime not null,  
14     numberOfGuests int not null,  
15     specialRequests varchar(200),  
16     foreign key (customerId) references customers(customerId)  
17 );  
18  
19 • create table dinningPreferences (  
20     preferenceId int not null primary key auto_increment,  
21     customerId int not null,  
22     favoriteTable varchar(45),  
23     dietaryRestrictions varchar(200),  
24     foreign key (customerId) references customers(customerId)  
25 );  
26  
27 • insert into customers(customerName, contactInfo) values  
28     ("Brandon Shelton", '3497089032'),  
29     ("Colby Booth", '9637489034'),  
30     ("Kimber Haley", '2857340483');  
31  
32 • insert into reservations(reservationTime, numberOfGuests, specialRequests, customerId) values  
33     ("2024-08-15 18:26:56", 4, "Red table theme; indoors", 3),  
34     ("2024-05-14 14:30:45", 2, "Have table next to window; indoors", 2),  
35     ("2024-03-12 10:15:37", 3, "Cake for birthday celebration; indoors", 1);  
36
```

confused since I downloaded python from their own website but after downloading it from the store I was finally able to connect my python and mysql. Another slight mistake I encountered such as forgetting to add one line made everything not function even if it's the smallest line. I

faced this issue while constructing the table in MySQL. I forgot to include numberOfGuests in the table reservations. Not incorporating this led to an error in the future code I decided to implement. Shown above line 14 and line 32 could not connect due to me forgetting to include numberOfGuests. The reason why that line needs to be incorporated is because without that line the insert values for numberOfGuests can't reference that table since it doesn't exist.

Besides that error I made sure to include all the data that the website will be referring to. To start off I created the database that will hold all the information for the project. I created a table for the customers, the reservations, and the dining preference. Making sure to insert values into each table that I have created. In addition in order for the tables to connect with one another you have to make sure to include foreign keys allowing that table to reference other tables within the file.

Restaurant Portal

[Home](#) | [Add Reservation](#) | [View Reservations](#)

All Reservations

Reservation ID	Customer ID	Reservation Time	Number of Guests	Special Requests
1	3	2024-08-15 18:26:56	4	Red table theme; indoors
2	2	2024-05-14 14:30:45	2	Have table next to window; indoors
3	1	2024-03-12 10:15:37	3	Cake for birthday celebration; indoors

This allows the table to be populated with information to be displayed on the website.

In order for me to get into the website I had to add a code that was (from urllib.parse import parse_qs) this part of the code is essential in order for the website to direct the given file information to be displayed on the web.

```
RestaurantServer.py - D:\FINALPROJECTS\RestaurantServer.py (3.12.3)
File Edit Format Run Options Window Help
from http.server import HTTPServer, BaseHTTPRequestHandler
from os import curdir, sep
from restaurantDatabase import RestaurantDatabase
from urllib.parse import parse_qs

class RestaurantPortalHandler(BaseHTTPRequestHandler):

    def __init__(self, *args):
        self.database = RestaurantDatabase()
        BaseHTTPRequestHandler.__init__(self, *args)

    def do_POST(self):
        try:
            if self.path == '/addReservation':
                self.send_response(200)
                self.send_header('Content-type', 'text/html')
                self.end_headers()
                form = parse_qs.FieldStorage(
                    fp=self.rfile,
                    headers=self.headers,
                    environ={'REQUEST_METHOD': 'POST'})

                customer_id = int(form.getvalue("customer_id"))
                reservation_time = form.getvalue("reservation_time")
                number_of_guests = int(form.getvalue("number_of_guests"))
                special_requests = form.getvalue("special_requests")

                # Call the Database Method to add a new reservation
                self.database.addReservation(customer_id, reservation_time, number_of_guests, special_request)
                print("Reservation added for customer ID:", customer_id)

                self.wfile.write(b"<html><head><title>Restaurant Portal</title></head>")
                self.wfile.write(b"<body>")
                self.wfile.write(b"<center><h1>Restaurant Portal</h1>")
                self.wfile.write(b"<hr>")
                self.wfile.write(b"<div> <a href='\"/\"'>Home</a> \ \
                <a href='\"/addReservation\"'>Add Reservation</a> \
                <a href='\"/viewReservations\"'>View Reservations</a></div> \
                <a href='\"/addCustomer\"'>Add Customer</a></div> \
                ")
                self.wfile.write(b"<hr>")
                self.wfile.write(b"<h3>Reservation has been added</h3>")
                self.wfile.write(b"<div><a href='\"/addReservation\"'>Add Another Reservation</a></div>")
                self.wfile.write(b"</center></body></html>")

            except IOError:
                self.send_error(404, 'File Not Found: %s' % self.path)

        return

restaurantDatabase.py - D:\FINALPROJECTS\restaurantDatabase.py (3.12.3)
File Edit Format Run Options Window Help
import mysql.connector
from mysql.connector import Error

class RestaurantDatabase():

    def __init__(self,
                 host="localhost",
                 port="3306",
                 database="restaurant_reservations",
                 user="root",
                 password="Marcosmpol17"):

        self.host = host
        self.port = port
        self.database = database
        self.user = user
        self.password = password
        self.connection = None
        self.cursor = None
        self.connect()

    def connect(self):
        try:
            self.connection = mysql.connector.connect(
                host=self.host,
                port=self.port,
                database=self.database,
                user=self.user,
                password=self.password)

            if self.connection.is_connected():
                print("Successfully connected to the database")
                return
        except Error as e:
            print("Error while connecting to MySQL", e)

    def addReservation(self, customer_id, reservation_time, number_of_guests, special_requests):
        ''' Method to insert a new reservation into the reservations table '''
        if self.connection.is_connected():
            self.cursor = self.connection.cursor()
            query = "INSERT INTO reservations (customer_id, reservation_time, number_of_guests, special_requests)
            self.cursor.execute(query, (customer_id, reservation_time, number_of_guests, special_requests))
            self.connection.commit()
            print("Reservation added successfully")
            return

    def getAllReservations(self):
        ''' Method to get all reservations from the reservations table '''
        if self.connection.is_connected():
            self.cursor = self.connection.cursor()
            query = "SELECT * FROM reservations"
```

The first issue I arrived at was not being able to view the website. I thought that I wrote the code incorrectly while doing so. It was my password that I entered wrong. After fixing it it still didn't work. I looked up different forums in order to confirm that I have used the correct code in order to see that display on the web. After multiple tries I figured out that I had to run both files at the same time. First it was going to be the restaurant database then following would be the restaurant server. I am still amazed at what I have created in this project and will keep practicing in order to create new websites.

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