Project Title: CPA Office Appointments Database Project

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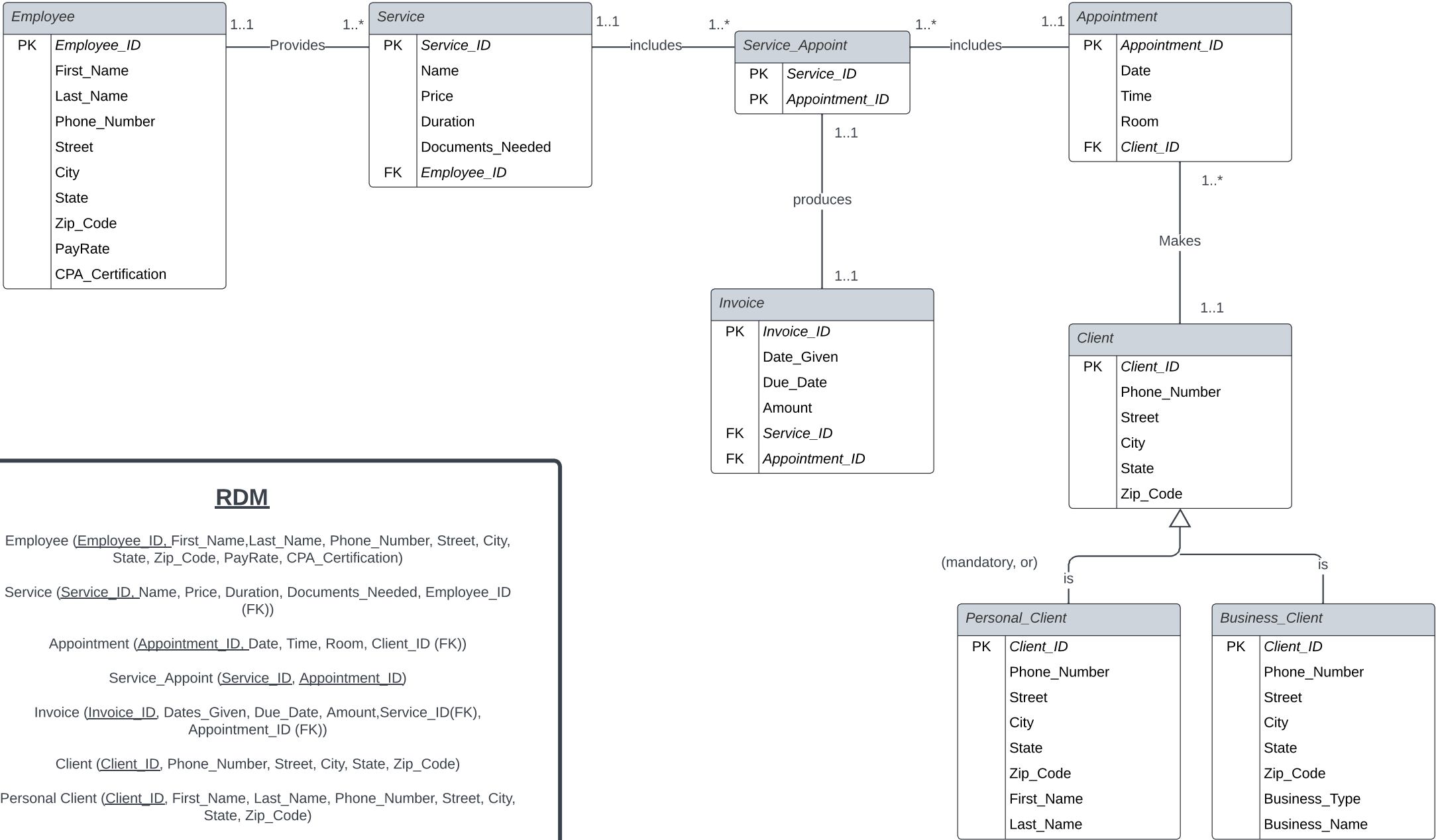Mohamadou Tunkar (mohamadou.tunkara@baruchmail.cuny.edu)

Course Number/Section: CIS 3400 PWMA (56705)

Introduction: We own a small CPA office based in NYC that provides various accounting and financial services to multiple clients. To keep track of certain information like employee information or appointments, we keep a paper trail in order to keep track of everything. We decided to create a database system in order to create efficiency in our office. This would have multiple benefits beyond tracking data, it would help analyze our data into useful information that would increase our profits and improve our client relations. We would also be able to answer queries such as how much revenue we will get by a certain date or our client type information.

Conclusion: As a group, we thought making the ERD was the easiest step because we were allowed to be creative with the entities we made as well as the information that was required. It was also fun creating and linking the tables because it felt like a puzzle piece. If we had more time we would've added a recursive relationship such as a manager table. The most difficult step was the normalization of our function dependencies because there were limitations as to what we can do. We tried our best to simplify everything and make it work. Learning to design and create a database from scratch in SQL using Microsoft SQL Server is a huge experience that was learned by all members and a really powerful tool we hope to utilize in our future projects.

The new system has a lot of benefits that can help our proposed CPA office. The database can be able to make queries that analyze our data and be able to give us information that would take a long time to do manually. It creates efficiency for the office and allows for the realization of new information.

# ERD

## Employee
| | |
|---|---|
| PK | *Employee_ID* |
| | First_Name |
| | Last_Name |
| | Phone_Number |
| | Street |
| | City |
| | State |
| | Zip_Code |
| | PayRate |
| | CPA_Certification |

1..1 — Provides — 1..* 

## Service
| | |
|---|---|
| PK | *Service_ID* |
| | Name |
| | Price |
| | Duration |
| | Documents_Needed |
| FK | *Employee_ID* |

1..1 — includes — 1..*

## Service_Appoint
| | |
|---|---|
| PK | *Service_ID* |
| PK | *Appointment_ID* |

1..* — includes — 1..*

## Appointment
| | |
|---|---|
| PK | *Appointment_ID* |
| | Date |
| | Time |
| | Room |
| FK | *Client_ID* |

1..1 — produces — 1..1

## Invoice
| | |
|---|---|
| PK | *Invoice_ID* |
| | Date_Given |
| | Due_Date |
| | Amount |
| FK | *Service_ID* |
| FK | *Appointment_ID* |

1..1

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Makes

1..1

## Client
| | |
|---|---|
| PK | *Client_ID* |
| | Phone_Number |
| | Street |
| | City |
| | State |
| | Zip_Code |

(mandatory, or)  —  is  —  is

## Personal_Client
| | |
|---|---|
| PK | *Client_ID* |
| | Phone_Number |
| | Street |
| | City |
| | State |
| | Zip_Code |
| | First_Name |
| | Last_Name |

## Business_Client
| | |
|---|---|
| PK | *Client_ID* |
| | Phone_Number |
| | Street |
| | City |
| | State |
| | Zip_Code |
| | Business_Type |
| | Business_Name |

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## RELATIONSHIP SENTENCES

One employee provides many services
One service can be provided by one employee

One service can include many service appointments
One service appointment can include one service

One service appointment icnludes one appointment
One appointment includes many service appointments

One service_appoint can produce one invoice
One invoice can be produced by one service_appoint

One client can make many appointments
One appointment can be made by one client

A client must be a personal client or a business client

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## RDM

Employee (Employee_ID, First_Name,Last_Name, Phone_Number, Street, City, State, Zip_Code, PayRate, CPA_Certification)

Service (Service_ID, Name, Price, Duration, Documents_Needed, Employee_ID (FK))

Appointment (Appointment_ID, Date, Time, Room, Client_ID (FK))

Service_Appoint (Service_ID, Appointment_ID)

Invoice (Invoice_ID, Dates_Given, Due_Date, Amount,Service_ID(FK), Appointment_ID (FK))

Client (Client_ID, Phone_Number, Street, City, State, Zip_Code)

Personal Client (Client_ID, First_Name, Last_Name, Phone_Number, Street, City, State, Zip_Code)

Business_Client (Client_ID, First_Name, Last_Name, Phone_Number, Street, City, State, Zip_Code)

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## CPA OFFICE APPOINTMENT PROJECT

## GROUP 1

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## NORMALIZATION

## Normalization

R (Employee, Client, Service, Appointment, Service_Appoint, Invoice, Personal_Client, Business_Client)
Key: Employee, Client

F1: Empolyee, Client $\longrightarrow$ Service, Appointment, Service_Appoint, Invoice, Personal_Client, Business_Client

F2: Employee $\longrightarrow$ Service

F3: Client $\longrightarrow$ Appointment , Personal_Client, Business_Client

F4: Service_Appoint $\longrightarrow$ Invoice

<2NF>
R1 (Employee, Service)
R2 (Client, Appointment, Personal_Client, Business_Client)

~~R3 (Employee, Client, Service_Appoint, Invoice)~~

<3NF>
R4 (Service_Appoint, Invoice)
R3 (Employee, Client, Sercice_Appoint)

```sql
create table Employee(
Employee_ID int not null,
First_Name varchar(350),
Last_Name varchar(350),
Phone_Number varchar(350),
Street varchar(350),
City varchar(350),
State varchar(350),
Zip_Code int,
PayRate int,
CPA_Certification_Num int
primary key (Employee_ID)
);

create table Servicese(
Service_ID int not null,
ServiceName Varchar(350),
Service_Price int,
Service_Duration int,
Service_Documents varchar(350),
Employee_ID int not null,
primary key (Service_ID),
);

create table Client(
Client_ID int not null,
Client_Phone varchar(350),
Clinet_Street varchar(350),
Client_City varchar(350),
Client_State varchar(350),
Client_Zipcode varchar(350),
primary key (Client_ID),
);

create table Appointment(
Appointment_ID int not null,
Appointment_Date date,
Appointment_Time time,
Appointment_Room varchar(350),
Client_ID int not null,
primary key (Appointment_ID),
);

create table Personal_Client(
```

```sql
Client_ID int not null,
Client_Phone varchar(350),
Clinet_Street varchar(350),
Client_City varchar(350),
Client_State varchar(350),
Client_Zipcode varchar(350),
Client_FirstName varchar(350),
Client_LastName varchar(350),
Primary key (Client_ID),
);

create table Business_Client(
Client_ID int not null,
Client_Phone varchar(350),
Clinet_Street varchar(350),
Client_City varchar(350),
Client_State varchar(350),
Client_Zipcode varchar(350),
Business_Type varchar(350) ,
Business_Name varchar(350),
Primary key (Client_ID),
);

create table Service_Appointment(
Service_ID int not null,
Appointment_ID int not null,
CONSTRAINT pk_Service_APP_Service_APP primary key (Service_ID, Appointment_ID),
);


create table Invoice(
Invoice_ID int not null,
Invoice_GivenDate date,
Invoice_DueDate date,
Invoice_Amount int,
Appointment_ID int not null,
Service_ID int not null,
primary key (Invoice_ID),
);

ALTER TABLE Servicese
ADD CONSTRAINT fk_servicese_employee_id
FOREIGN KEY (Employee_ID) references Employee (Employee_ID)
```

```sql
ALTER TABLE Appointment
ADD CONSTRAINT fk_Appointment_Client_ID
FOREIGN KEY (Client_ID) references Client (Client_ID);

ALTER TABLE Personal_Client
ADD CONSTRAINT fk_Personal_Client_Client_ID
FOREIGN KEY (Client_ID) references Client (Client_ID);

ALTER TABLE Business_Client
ADD CONSTRAINT fk_Business_Client_Client_ID
FOREIGN KEY (Client_ID) references Client (Client_ID);

ALTER TABLE Service_Appointment
ADD CONSTRAINT fk_Service_Appoint_Service_ID
FOREIGN KEY (Service_ID) references Servicese (Service_ID);

ALTER TABLE Service_Appointment
ADD CONSTRAINT fk_Service_Appoint_Appointment_ID
FOREIGN KEY (Appointment_ID) references Appointment (Appointment_ID);

ALTER TABLE Invoice
ADD CONSTRAINT fk_Invoice_Service_ID
FOREIGN KEY (Service_ID) references Servicese (Service_ID);

ALTER TABLE Invoice
ADD CONSTRAINT fk_Invoice_Appointment_ID
FOREIGN KEY (Appointment_ID) references Appointment (Appointment_ID);
```

==EMPLOYEE==
```sql
Insert into
Employee(Employee_ID,First_Name,Last_Name,Phone_Number,Street,City,State,Zip_Code,PayRate,CPA_Certification_Num)
VALUES('1001','Robert','Smith','7675656568','212 Foxt Street','NYC','NY','11726','20','636362')

INSERT INTO Employee(Employee_ID, First_Name, Last_Name, Phone_Number, Street, City, State, Zip_Code, PayRate, CPA_Certification_Num)
VALUES ('1010', 'Marie', 'Lopez', '7463547354', '88 Rodeo Drive', 'NYC', 'NY', '02116', '20', '747472');

INSERT INTO Employee(Employee_ID, First_Name, Last_Name, Phone_Number, Street, City, State, Zip_Code, PayRate, CPA_Certification_Num)
VALUES ('1011', 'Bruce', 'Ryan', '9172223740', '323 Queens Blvd', 'NYC', 'NY', '60601', '25', '858585');
```

INSERT INTO Employee(Employee_ID, First_Name, Last_Name, Phone_Number, Street, City, State, Zip_Code, PayRate, CPA_Certification_Num)
VALUES ('1012', 'Thomas', 'Zach', '3472663741', '246 Evene Street', 'Paterson', 'NJ', '90001', '20', '969696');

INSERT INTO Employee(Employee_ID, First_Name, Last_Name, Phone_Number, Street, City, State, Zip_Code, PayRate, CPA_Certification_Num)
VALUES ('1013', 'Michael', 'Jack', '8373837389', '111 Nancy Drive', 'Paterson', 'NJ', '75201', '20', '010101');

INSERT INTO Employee(Employee_ID, First_Name, Last_Name, Phone_Number, Street, City, State, Zip_Code, PayRate, CPA_Certification_Num)
VALUES ('1014', 'Allie', 'Ahmed', '4337576876', '21 Pine Street', 'Paterson', 'NJ', '30301', '21', '121212');

INSERT INTO Employee(Employee_ID, First_Name, Last_Name, Phone_Number, Street, City, State, Zip_Code, PayRate, CPA_Certification_Num)
VALUES ('1015', 'David', 'Miller', '6765536989', '009 Bridge Road', 'NYC', 'NY', '23452', '21', '232323');

INSERT INTO Employee(Employee_ID, First_Name, Last_Name, Phone_Number, Street, City, State, Zip_Code, PayRate, CPA_Certification_Num)
VALUES ('1016', 'Jenny', 'Thomas', '7675344432', '87 Circle Street', 'Albany', 'NY', '12332', '18', '8373637');

==Servicese==
INSERT INTO Servicese(Service_ID,ServiceName,Service_Price,Service_Duration,Service_Documents,Employee_ID )
VALUES ('19261','Tax Prep','50','1','W-2','1001');

INSERT INTO Servicese (Service_ID, ServiceName, Service_Price, Service_Duration, Service_Documents, Employee_ID)
VALUES ('19271', 'Bookkeeping', '75', '2', '1099', '1010');

INSERT INTO Servicese (Service_ID, ServiceName, Service_Price, Service_Duration, Service_Documents, Employee_ID)
VALUES ('19292','Tax Prep','50','1','W-2','1010');

INSERT INTO Servicese (Service_ID, ServiceName, Service_Price, Service_Duration, Service_Documents, Employee_ID)
VALUES ('19291','Tax Prep','50','1','W-2','1001');

INSERT INTO Servicese (Service_ID, ServiceName, Service_Price, Service_Duration, Service_Documents, Employee_ID)
VALUES ('19281', 'Bookkeeping', '75', '2', '1099', '1012');

INSERT INTO Servicese (Service_ID, ServiceName, Service_Price, Service_Duration, Service_Documents, Employee_ID)
VALUES ('19275', 'Financial Planning', '250', '6', 'Statements,', '1014');

INSERT INTO Servicese (Service_ID, ServiceName, Service_Price, Service_Duration, Service_Documents, Employee_ID)
VALUES ('19270', 'Financial Planning', '250', '6', 'Statements,', '1014');

INSERT INTO Servicese (Service_ID, ServiceName, Service_Price, Service_Duration, Service_Documents, Employee_ID)
VALUES ('19277', 'Business Consulting', '350', '8', 'Business Plans', '1014');

INSERT INTO Servicese (Service_ID, ServiceName, Service_Price, Service_Duration, Service_Documents, Employee_ID)
VALUES ('19276', 'Financial Planning', '250', '6', 'Statements,', '1016');

INSERT INTO Servicese (Service_ID, ServiceName, Service_Price, Service_Duration, Service_Documents, Employee_ID)
VALUES ('19279', 'Debt Management', '125', '3', 'Loans', '1010');

<mark>Client</mark>
INSERT INTO
Client(Client_ID,Client_Phone,Clinet_Street,Client_City,Client_State,Client_Zipcode)
VALUES ('2001','3636828372','32 Eagle Way','NYC','NY','88899');

INSERT INTO Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode)
VALUES ('2011', '2128675309', '1808 Drive', 'NYC', 'NY', '10025');

INSERT INTO Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode)
VALUES ('2012', '3105557788', '6252 Hillside Ave', 'LA', 'CA', '90210');

INSERT INTO Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode)
VALUES ('2013', '7734441234', '111 Downing Street', 'NYC', 'NY', '60601');

INSERT INTO Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode)
VALUES ('2004', '28282827326', '6272 Queens Blvd', 'NYC', 'NY', '94102');

INSERT INTO Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode)
VALUES ('2005', '6173732211', '111 Nancy Ave', 'Boston', 'MA', '02114');

INSERT INTO Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode)
VALUES ('2006', '2067779980', '929 Ryan Blvd', 'Dallas', 'TX', '98101');

INSERT INTO Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode)
VALUES ('2017', 'I385347463', '3 Apple Drive', 'NYC', 'NYC', '87501');

INSERT INTO Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode)
VALUES ('2018', '3036665577', '1600 Downing Street', 'NYC', 'NY', '80202');

INSERT INTO Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode)
VALUES ('2019', '7134448899', '123 Main Street', 'Dallas', 'TX', '77002');

Personal_Client
INSERT INTO Personal_Client(Client_ID,Client_Phone,Clinet_Street,Client_City,Client_State,Client_Zipcode,Client_FirstName,Client_LastName)
VALUES ('2001','3636828372','32 Eagle Way','NYC','NY','88899','Angel','Jones');

INSERT INTO Personal_Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode,Client_FirstName,Client_LastName)
VALUES ('2011', '2128675309', '1808 Drive', 'NYC', 'NY', '10025','Jenna','Thompson');

INSERT INTO Personal_Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode,Client_FirstName,Client_LastName)
VALUES ('2012', '3105557788', '6252 Hillside Ave', 'LA', 'CA', '90210','Felix','Tony');

INSERT INTO Personal_Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode,Client_FirstName,Client_LastName)
VALUES ('2013', '7734441234', '111 Downing Street', 'NYC', 'NY', '60601','Nancy','Smith');

INSERT INTO Personal_Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode,Client_FirstName,Client_LastName)
VALUES ('2004', '28282827326', '6272 Queens Blvd', 'NYC', 'NY', '94102','Oliver','Rock');

INSERT INTO Business_Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode, Business_Type, Business_Name)
VALUES('2005', '6173732211', '111 Nancy Ave', 'Boston', 'MA', '02114','Wholesale','Animal Food');

INSERT INTO Business_Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode,Business_Type, Business_Name)
VALUES ( '2006', '2067779980', '929 Ryan Blvd', 'Seattle', 'WA', '98101','Wholesale','Tims Metal');

INSERT INTO Business_Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode,Business_Type, Business_Name)
VALUES ('2017', 'I385347463', '3 Apple Drive', 'NYC', 'NYC', '87501','Healthcare','NYU Hospital');

INSERT INTO Business_Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode,Business_Type, Business_Name)
VALUES ('2018', '3036665577', '1600 Downing Street', 'NYC', 'NY', '80202','Healthcare','Columbia Hospital');

INSERT INTO Business_Client (Client_ID, Client_Phone, Clinet_Street, Client_City, Client_State, Client_Zipcode,Business_Type, Business_Name)
VALUES  ('2019', '7134448899', '123 Main Street', 'Dallas', 'TX', '77002','Tech','FaceTech');

Appointment
INSERT INTO Appointment(Appointment_ID,Appointment_Date,Appointment_Time,Appointment_Room,Client_ID)
VALUES ('2283','12/10/2023','2:00','10','2001');

INSERT INTO Appointment(Appointment_ID,Appointment_Date,Appointment_Time,Appointment_Room,Client_ID)
VALUES ('2293','12/20/2023','10:00','12','2011');

INSERT INTO Appointment(Appointment_ID,Appointment_Date,Appointment_Time,Appointment_Room,Client_ID)
VALUES ('2294','12/21/2023','14:00','13','2012');

INSERT INTO
Appointment(Appointment_ID,Appointment_Date,Appointment_Time,Appointment_Room,Client
_ID)
VALUES ('2295','12/22/2023','16:00','14','2013');

INSERT INTO
Appointment(Appointment_ID,Appointment_Date,Appointment_Time,Appointment_Room,Client
_ID)
VALUES ('2296','12/23/2023','10:00','15','2004');

INSERT INTO
Appointment(Appointment_ID,Appointment_Date,Appointment_Time,Appointment_Room,Client
_ID)
VALUES ('2297','12/24/2023','12:00','16','2005');

INSERT INTO
Appointment(Appointment_ID,Appointment_Date,Appointment_Time,Appointment_Room,Client
_ID)
VALUES ('2298','12/25/2023','14:00','17','2006');

INSERT INTO
Appointment(Appointment_ID,Appointment_Date,Appointment_Time,Appointment_Room,Client
_ID)
VALUES ('2299','12/26/2023','16:00','18','2005');

INSERT INTO
Appointment(Appointment_ID,Appointment_Date,Appointment_Time,Appointment_Room,Client
_ID)
VALUES ('2300','12/27/2023','10:00','19','2001');

INSERT INTO
Appointment(Appointment_ID,Appointment_Date,Appointment_Time,Appointment_Room,Client
_ID)
VALUES ('2301','12/28/2023','12:00','20','2012');

==Service_Appointment==

INSERT INTO Service_Appointment(Service_ID,Appointment_ID)
VALUES ('19261','2283');

INSERT INTO Service_Appointment(Service_ID,Appointment_ID)
VALUES ('19271','2293');

INSERT INTO Service_Appointment(Service_ID,Appointment_ID)

VALUES ('19292','2294');

INSERT INTO Service_Appointment(Service_ID,Appointment_ID)
VALUES ('19291','2295');

INSERT INTO Service_Appointment(Service_ID,Appointment_ID)
VALUES ('19281','2296');

INSERT INTO Service_Appointment(Service_ID,Appointment_ID)
VALUES ('19275','2297');

INSERT INTO Service_Appointment(Service_ID,Appointment_ID)
VALUES ('19270','2298');

INSERT INTO Service_Appointment(Service_ID,Appointment_ID)
VALUES ('19277','2299');

INSERT INTO Service_Appointment(Service_ID,Appointment_ID)
VALUES ('19276','2300');

INSERT INTO Service_Appointment(Service_ID,Appointment_ID)
VALUES ('19279','2301');

Invoice
INSERT INTO
Invoice(Invoice_ID,Invoice_DueDate,Invoice_GivenDate,Invoice_Amount,Service_ID,Appointment_ID)
VALUES ('00191','1/30/2024','1/1/2024','50','19261','2283');

INSERT INTO
Invoice(Invoice_ID,Invoice_DueDate,Invoice_GivenDate,Invoice_Amount,Service_ID,Appointment_ID)
VALUES ('00192','1/30/2024','1/1/2024','100','19271','2293');

INSERT INTO
Invoice(Invoice_ID,Invoice_DueDate,Invoice_GivenDate,Invoice_Amount,Service_ID,Appointment_ID)
VALUES ('00193','1/30/2024','1/1/2024','100','19292','2294');

INSERT INTO
Invoice(Invoice_ID,Invoice_DueDate,Invoice_GivenDate,Invoice_Amount,Service_ID,Appointment_ID)
VALUES ('00194','1/30/2024','1/1/2024','150','19291','2295');

INSERT INTO
Invoice(Invoice_ID,Invoice_DueDate,Invoice_GivenDate,Invoice_Amount,Service_ID,Appointment_ID)
VALUES ('00195','1/30/2024','1/1/2024','200','19281','2296');

INSERT INTO
Invoice(Invoice_ID,Invoice_DueDate,Invoice_GivenDate,Invoice_Amount,Service_ID,Appointment_ID)
VALUES ('00196','1/20/2024','1/1/2024','400','19275','2297');

INSERT INTO
Invoice(Invoice_ID,Invoice_DueDate,Invoice_GivenDate,Invoice_Amount,Service_ID,Appointment_ID)
VALUES ('00197','1/25/2024','1/1/2024','20','19270','2298');

INSERT INTO
Invoice(Invoice_ID,Invoice_DueDate,Invoice_GivenDate,Invoice_Amount,Service_ID,Appointment_ID)
VALUES ('00198','1/16/2024','1/1/2024','50','19277','2299');

INSERT INTO
Invoice(Invoice_ID,Invoice_DueDate,Invoice_GivenDate,Invoice_Amount,Service_ID,Appointment_ID)
VALUES ('00199','1/16/2024','1/1/2024','50','19276','2300');

INSERT INTO
Invoice(Invoice_ID,Invoice_DueDate,Invoice_GivenDate,Invoice_Amount,Service_ID,Appointment_ID)
VALUES ('00123','1/15/2024','1/1/2024','50','19279','2301');


Queries

1) How many invoices a client has and what's the total amount they owe?

    SELECT Client.Client_ID, COUNT(Invoice.Invoice_ID) AS Invoice_Count,
    SUM(Invoice.Invoice_Amount) AS Total_Amount
    FROM Client
    JOIN Appointment ON Client.Client_ID = Appointment.Client_ID
    JOIN Invoice ON Appointment.Appointment_ID = Invoice.Appointment_ID
    GROUP BY Client.Client_ID;

| | Client_ID | Invoice_Count | Total_Amount |
|---|---|---|---|
| 1 | 2001 | 2 | 100 |
| 2 | 2004 | 1 | 200 |
| 3 | 2005 | 2 | 450 |
| 4 | 2006 | 1 | 20 |
| 5 | 2011 | 1 | 100 |
| 6 | 2012 | 2 | 150 |
| 7 | 2013 | 1 | 150 |

2) What's the most popular service in our office based on appointments?

SELECT Servicese.ServiceName, COUNT(*) AS Service_Appointment_Counts
FROM Servicese
JOIN Service_Appointment ON Servicese.Service_ID =
Service_Appointment.Service_ID
GROUP BY Servicese.ServiceName
ORDER BY Service_Appointment_Counts DESC;



| | ServiceName | Service_Appointment_Counts |
|---|---|---|
| 1 | Financial Planning | 3 |
| 2 | Tax Prep | 3 |
| 3 | Bookkeeping | 2 |
| 4 | Business Consulting | 1 |
| 5 | Debt Management | 1 |

3) What is the appointment information within a specific date range?
 What is the personal client's name or business client's name?

SELECT Appointment.*, Personal_Client.Client_FirstName,
Personal_Client.Client_LastName, Business_Client.Business_Name
FROM Appointment
LEFT JOIN Personal_Client ON Appointment.Client_ID = Personal_Client.Client_ID
LEFT JOIN Business_Client ON Appointment.Client_ID = Business_Client.Client_ID
WHERE Appointment.Appointment_Date>='2023-12-10' AND
Appointment.Appointment_Date<='2023-12-24';

| | Appointment_ID | Appointment_Date | Appointment_Time | Appointment_Room | Client_ID | Client_FirstName | Client_LastName | Business_Name |
|---|---|---|---|---|---|---|---|---|
| 1 | 2283 | 2023-12-10 | 02:00:00.0000000 | 10 | 2001 | Angel | Jones | NULL |
| 2 | 2293 | 2023-12-20 | 10:00:00.0000000 | 12 | 2011 | Jenna | Thompson | NULL |
| 3 | 2294 | 2023-12-21 | 14:00:00.0000000 | 13 | 2012 | Felix | Tony | NULL |
| 4 | 2295 | 2023-12-22 | 16:00:00.0000000 | 14 | 2013 | Nancy | Smith | NULL |
| 5 | 2296 | 2023-12-23 | 10:00:00.0000000 | 15 | 2004 | Oliver | Rock | NULL |
| 6 | 2297 | 2023-12-24 | 12:00:00.0000000 | 16 | 2005 | NULL | NULL | Animal Food |

4) What clients have not made an appointment? What is their contact information?

SELECT Client.Client_ID,Client.Client_Phone
FROM Client
LEFT JOIN Appointment ON Client.Client_ID = Appointment.Client_ID
WHERE Appointment.Appointment_ID IS NULL;

Results | Messages

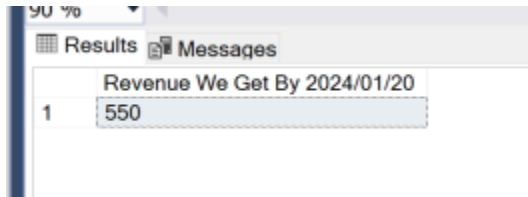| | Client_ID | Client_Phone |
|---|---|---|
| 1 | 2017 | I385347463 |
| 2 | 2018 | 3036665577 |
| 3 | 2019 | 7134448899 |

5) How many appointments does each business sector have from our business clients?

SELECT Business_Client.Business_Type, COUNT(*) AS Appointment_Counts
FROM Business_Client
JOIN Appointment ON Business_Client.Client_ID = Appointment.Client_ID
GROUP BY Business_Client.Business_Type

90 %

Results | Messages

| | Business_Type | Appointment_Counts |
|---|---|---|
| 1 | Wholesale | 3 |

6) How much revenue will we get by a certain date?

```
SELECT SUM(Invoice.Invoice_Amount) AS 'Revenue We Get By 2024/01/20'
FROM Invoice
WHERE Invoice.Invoice_DueDate <= '2024-01-20';
```

| | Revenue We Get By 2024/01/20 |
|---|---|
| 1 | 550 |