# **Overview**

We are creating a database for our client, Airbnb, an online marketplace for short-term homestays. Airbnb acts as a broker and charges a commission from the homeowners as well as renters from each booking.

Our objective is to improve and enhance Airbnb's handling of databases to increase business efficiency. A 2021 study of more than 125,000 Airbnb complaints on Twitter

found that 72% of the issues were related to poor customer service, and 22% were related to scams showing that it is not very secure. Airbnb does not have a loyalty program where "points" or promotional bonuses can be earned; hosts determine pricing, and finding deals requires intense searching and luck.

We will address the above-stated issues in our database. Our assumption is that Reservations have already been placed through Airbnb and we will use the existing data about homeowners, previous renters(users/customers), and the history of their past accommodations including invoices to improve the handling of customer conflicts and implement a Reward system.

# List of entities and attributes:

# PropertyHost (Renter)

- HostID
- FirstName
- LastName
- HouseNo.
- City
- State
- Zip
- Contact
- PropertyID
- BankAccount

# SpaceHosted (Renter Property)

- PropertyID
- PropertyType
- PropertyDescription
- Boroughs
- Neighborhood
- Available 365 Days
- Price/Day
- Amenities

# EndClient (Customer/Rentee)

- CustomerID
- FirstName
- LastName
- DOB
- HouseNo.
- City
- State
- Zip
- Contact
- CreditCard

# SupportTicket (Airbnb Ticketing System)

- TicketID
- Status
- DateOpen
- DateClose
- CustomerID
- PropertyID

#### AirbnbAgent (Airbnb Staff)

- AgentID
- TicketID

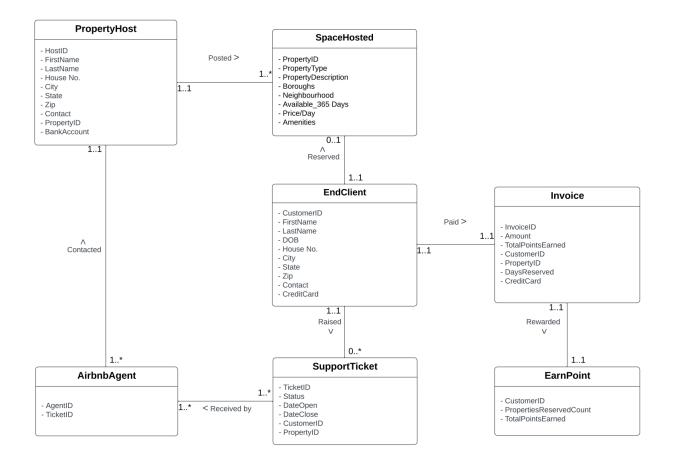
# EarnPoint (Loyalty Program)

- CustomerID
- PropertiesReservedCount
- TotalPointsEarned

# Invoice (Renter Price)

- InvoiceID
- Amount
- TotalPointsEarned
- CustomerID
- PropertyID
- DaysReserved
- CreditCard

# **Entity Relationship Diagram with UML Notations**



# **Relationship Sentences**

"PropertyHost (Renter) posted SpaceHosted (Renter Property)"

"Customer reserves SpaceHosted (Renter Property)"

"Customer paid the Invoice"

"Invoice rewarded LoyaltyPoint"

"Customer raised a SupportTicket"

"SupportTicket received by the AirbnbAgent"

"AirbnbAgent contacted PropertyHost (Renter)"

# **Relations from E-R Model**

# **PropertyHost:**

"One PropertyHost (Renters) posted one or many SpaceHosted (Renter Property)."

#### **Customer:**

"One Customer can reserve zero or one SpaceHosted (Renter Property)."

"One Customer paid one and only one Invoice"

"One Customer raises zero or many SupportTickets"

#### Invoice:

"One Invoice is rewarded one and only one LoyaltyPoint"

#### SupportTickets:

"One SupportTicket received by one or many AirbnbAgents"

#### AirbnbAgent:

"One or many AirbnbAgents contact one and only one PropertyHost"

# **Normalization:**

# **PropertyHosts (Renters)**

1NF: Yes, every attribute value is a single value

2NF: Yes, no partial-key dependencies

3NF: Yes, no transitive dependencies

BCNF: Yes, every determinant is a candidate key

# **SpaceHosted (Renter Property)**

1NF: Yes, every attribute value is a single value

2NF: Yes, no partial-key dependencies

3NF: Yes, no transitive dependencies

BCNF: Yes, every determinant is a candidate key

# Airbnb Agents (Airbnb Staff)

1NF: Yes, every attribute value is a single value

2NF: Yes, no partial-key dependencies

3NF: Yes, no transitive dependencies

BCNF: Yes, every determinant is a candidate key

# **Support Tickets**

1NF: Yes, every attribute value is a single value

2NF: Yes, no partial-key dependencies

3NF: Yes, no transitive dependencies

BCNF: Yes, every determinant is a candidate key

# **End Clients (Customers Rentees)**

1NF: No, every attribute value is not a single value

Solution #1: created single attribute for State and ZipCode

Solution#2: created separate relations to remove redundancy

2NF: Yes, no partial-key dependencies

3NF: Yes, no transitive dependencies

BCNF: Yes, every determinant is a candidate key

# **Earn Points (Loyalty Program)**

1NF: No, every attribute value is not a single value

Solution#1: created separate relations to remove redundancy

2NF: No, partial-key dependencies were created using the invoice table

Solution#2: created separate partial-key relation due to integrity

3NF: Yes, no transitive dependencies

BCNF: Yes, every determinant is a candidate key

# **Invoice (Renter Price)**

1NF: No, every attribute value is not a single value

Solution#1: created separate relations to remove redundancy

2NF: Yes, no partial-key dependencies

3NF: Yes, no transitive dependencies

BCNF: Yes, every determinant is a candidate key

# Part 4: Database tables using SQL statement:

# 1. SpaceHosted TABLE

```
CREATE TABLE SpaceHosted (
PropertyID INT NOT NULL PRIMARY KEY,
PropertyType VARCHAR(55) NOT NULL,
PropertyDescription VARCHAR(255),
Boroughs VARCHAR(55),
Neighbourhood VARCHAR(60),
Available_365_Days INT,
Price_per_Day MONEY,
Amenities VARCHAR(255)
```

#### SpaceHosted DATA

);

INSERT INTO SpaceHosted (PropertyID, PropertyType, PropertyDescription, Boroughs, Neighbourhood, Available\_365\_Days, Price\_per\_Day, Amenities)

VALUES (12937, 'Duplex', 'Spacious Brooklyn Duplex', 'Brooklyn', 'Sunset Park', 267, 275.00, 'Pool, parking');

INSERT INTO SpaceHosted (PropertyID, PropertyType, PropertyDescription, Boroughs, Neighbourhood, Available\_365\_Days, Price\_per\_Day, Amenities)

VALUES (12940, 'Apartments', 'Cozy Clean Apt', 'Manhattan', 'Upper West Side', 15, 75.00, 'Garden, Wifi');

INSERT INTO SpaceHosted (PropertyID, PropertyType, PropertyDescription, Boroughs, Neighbourhood, Available\_365\_Days, Price\_per\_Day, Amenities)

VALUES (31130, 'Shared rooms', 'BlissArtsSpace', 'Brooklyn', 'Bedford-Stuyvesant', 322, 60.00, 'Parking, garden');

INSERT INTO SpaceHosted (PropertyID, PropertyType, PropertyDescription, Boroughs, Neighbourhood, Available\_365\_Days, Price\_per\_Day, Amenities)

VALUES (11943, 'Town house', 'Large Furnished townhouse', 'Manhattan', 'Midtown', 79, 68.00, 'Parking, washer & dryer');

INSERT INTO SpaceHosted (PropertyID, PropertyType, PropertyDescription, Boroughs, Neighbourhood, Available\_365\_Days, Price\_per\_Day, Amenities)

VALUES (13808, 'Loft', 'Skylit Midtown Castle', 'Manhattan', 'Midtown', 365, 175.00, 'Wifi');

INSERT INTO SpaceHosted (PropertyID, PropertyType, PropertyDescription, Boroughs, Neighbourhood, Available\_365\_Days, Price\_per\_Day, Amenities)

VALUES (12192, 'Cabin', 'Uptown Sanctuary w/ Private Bath', 'Manhattan', 'East Harlem', 300, 65.00, 'Pets allowed');

INSERT INTO SpaceHosted (PropertyID, PropertyType, PropertyDescription, Boroughs, Neighbourhood, Available\_365\_Days, Price\_per\_Day, Amenities)

VALUES (29683, 'Villas', 'Lovely house 1 in BEST AREA', 'Brooklyn', 'South Slope', 163, 124.00, 'Water front');

INSERT INTO SpaceHosted (PropertyID, PropertyType, PropertyDescription, Boroughs, Neighbourhood, Available\_365\_Days, Price\_per\_Day, Amenities)

VALUES (61509, 'Cottages', 'Only 2 stops to Manhattan studio', 'Brooklyn', 'Williamsburg', 151, 68.00, 'TV, Security camera');

INSERT INTO SpaceHosted (PropertyID, PropertyType, PropertyDescription, Boroughs, Neighbourhood, Available\_365\_Days, Price\_per\_Day, Amenities)

VALUES (31555, 'Studio', 'Perfect for Your Parents', 'Brooklyn', 'Fort Greene', 38, 220.00, 'Security camera');

INSERT INTO SpaceHosted (PropertyID, PropertyType, PropertyDescription, Boroughs, Neighbourhood, Available\_365\_Days, Price\_per\_Day, Amenities)

VALUES (14290, 'Shared rooms', 'UES Beautiful Blue Room', 'Manhattan', 'East Harlem', 308, 62.00, 'Garden');

INSERT INTO SpaceHosted (PropertyID, PropertyType, PropertyDescription, Boroughs, Neighbourhood, Available\_365\_Days, Price\_per\_Day, Amenities)

VALUES (62427, 'Cabin', 'luminous cabins', 'Brooklyn', 'Bedford-Stuyvesant', 316, 150.00, 'Backyard barbeque grill');

INSERT INTO SpaceHosted (PropertyID, PropertyType, PropertyDescription, Boroughs, Neighbourhood, Available\_365\_Days, Price\_per\_Day, Amenities)

VALUES (14314, 'Loft', 'Sweet and Spacious Brooklyn Loft', 'Brooklyn', 'Williamsburg', 332, 395.00, 'Parking, board games');

INSERT INTO SpaceHosted (PropertyID, PropertyType, PropertyDescription, Boroughs, Neighbourhood, Available\_365\_Days, Price\_per\_Day, Amenities)

VALUES (31902, 'Apartments', 'Wburg. Large, bright & tranquil', 'Brooklyn', 'Williamsburg', 24, 95.00, 'Kitchen');

INSERT INTO SpaceHosted (PropertyID, PropertyType, PropertyDescription, Boroughs, Neighbourhood, Available\_365\_Days, Price\_per\_Day, Amenities)

VALUES (31994, 'Duplex', 'Large B&B Style rooms', 'Brooklyn', 'Bedford-Stuyvesant', 232, 96.00, 'Parking, fire place');

INSERT INTO SpaceHosted (PropertyID, PropertyType, PropertyDescription, Boroughs, Neighbourhood, Available\_365\_Days, Price\_per\_Day, Amenities)

VALUES (62925, 'Apartments', 'Midtown Pied-a-terre', 'Manhattan', 'Hell\'s Kitchen', 60, 175.00, 'Balcony');

# 2. PropertyHosts TABLE

CREATE TABLE PropertyHosts (

HostID INT,

FirstName VARCHAR(50),

LastName VARCHAR(50),

HouseNo VARCHAR(50),

City VARCHAR(50),

State VARCHAR(50),

Zip INT,

Contact VARCHAR(50),

PropertyID INT,

BankAccount INT);

#### **PropertyHosts DATA**

INSERT INTO PropertyHosts (HostID, FirstName, LastName, HouseNo, City, State, Zip, Contact, PropertyID, BankAccount)

VALUES (7490, 'Mary', 'Teri', '3772 Delladonna Trail', 'San Jose', 'California', 95118, '408-909-3613', 12940, 686644819);

INSERT INTO PropertyHosts (HostID, FirstName, LastName, HouseNo, City, State, Zip, Contact, PropertyID, BankAccount)

VALUES (7356, 'Garon', 'Orestes', '97043 Hanover Drive', 'Fullerton', 'California', 92835, '714-572-7329', 31130, 777549789);

INSERT INTO PropertyHosts (HostID, FirstName, LastName, HouseNo, City, State, Zip, Contact, PropertyID, BankAccount)

VALUES (8967, 'Shunichi', 'Adreinne', '98809 Alpine Point', 'Saint Petersburg', 'Florida', 33705, '727-255-5756', 11943, 478751692);

INSERT INTO PropertyHosts (HostID, FirstName, LastName, HouseNo, City, State, Zip, Contact, PropertyID, BankAccount)

VALUES (2845, 'Jennifer', 'Lara', '55928 Springview Way', 'Moreno Valley', 'California', 92555, '951-621-7417', 13808, 311387825);

INSERT INTO PropertyHosts (HostID, FirstName, LastName, HouseNo, City, State, Zip, Contact, PropertyID, BankAccount)

VALUES (16104, 'Kae', 'Harriet', '79913 Goodland Drive', 'San Antonio', 'Texas', 78245, '210-657-1100', 12192, 534668021);

INSERT INTO PropertyHosts (HostID, FirstName, LastName, HouseNo, City, State, Zip, Contact, PropertyID, BankAccount)

VALUES (9744, 'Laurie', 'Tiziana', '81 Meadow Vale Court', 'San Antonio', 'Texas', 78205, '210-675-2514', 29683, 337220334);

INSERT INTO PropertyHosts (HostID, FirstName, LastName, HouseNo, City, State, Zip, Contact, PropertyID, BankAccount)

VALUES (15991, 'Allen', 'Edward', '5 Morning Alley', 'Temple', 'Texas', 76505, '254-317-7300', 61509, 935956477);

INSERT INTO PropertyHosts (HostID, FirstName, LastName, HouseNo, City, State, Zip, Contact, PropertyID, BankAccount)

VALUES (17571, 'Jane', 'Uli', '57 Montana Center', 'Washington', 'District of Columbia', 20210, '202-777-9085', 31555, 749660160);

INSERT INTO PropertyHosts (HostID, FirstName, LastName, HouseNo, City, State, Zip, Contact, PropertyID, BankAccount)

VALUES (16800, 'Cyn', 'Fonzy', '92902 Fieldstone Junction', 'Pensacola', 'Florida', 32595, '850-484-0176', 14290, 622615441);

INSERT INTO PropertyHosts (HostID, FirstName, LastName, HouseNo, City, State, Zip, Contact, PropertyID, BankAccount)

VALUES (25183, 'Nathalie', 'Tom', '69 Karstens Terrace', 'Corona', 'California', 92883, '951-734-5455', 62427, 898500169);

INSERT INTO PropertyHosts (HostID, FirstName, LastName, HouseNo, City, State, Zip, Contact, PropertyID, BankAccount)

VALUES (21207, 'Chaya', 'James', '3305 Ridgeview Terrace', 'San Diego', 'California', 92191, '619-454-4458', 14314, 888376182);

INSERT INTO PropertyHosts (HostID, FirstName, LastName, HouseNo, City, State, Zip, Contact, PropertyID, BankAccount)

VALUES (17297, 'Joelle', 'Brie', '78 Debra Trail', 'Washington', 'District of Columbia', 20010, '202-823-9309', 31902, 564715069);

INSERT INTO PropertyHosts (HostID, FirstName, LastName, HouseNo, City, State, Zip, Contact, PropertyID, BankAccount)

VALUES (35935, 'Angela', 'Jeanne', '709 Sugar Park', 'Chico', 'California', 95973, '530-130-5865', 31994, 970599487);

INSERT INTO PropertyHosts (HostID, FirstName, LastName, HouseNo, City, State, Zip, Contact, PropertyID, BankAccount)

VALUES (30193, 'Tommi', 'Sunder', '37 Pankratz Road', 'Houston', 'Texas', 77035, '713-976-3036', 62925, 991063120);

# 3. SupportTicket TABLE

# SupportTicket DATA

INSERT INTO SupportTicket (TicketID, Status, DateOpen, DateClose, CustomerID, PropertyID)

VALUES ('T-74632', 'Open', '2023-01-12', NULL, 'RA38543', 13808);

INSERT INTO SupportTicket (TicketID, Status, DateOpen, DateClose, CustomerID, PropertyID)
VALUES ('T-23447', 'Closed', '2022-12-02', '2023-01-05', 'CV34563', 12192);

INSERT INTO SupportTicket (TicketID, Status, DateOpen, DateClose, CustomerID, PropertyID)
VALUES ('T-12458', 'Pending', '2023-03-14', NULL, 'VS05643', 29683);

INSERT INTO SupportTicket (TicketID, Status, DateOpen, DateClose, CustomerID, PropertyID)
VALUES ('T-29346', 'Open', '2023-03-03', NULL, 'GK12345', 61509);

INSERT INTO SupportTicket (TicketID, Status, DateOpen, DateClose, CustomerID, PropertyID)
VALUES ('T-24785', 'Closed', '2022-12-11', '2022-12-29', 'TO83464', 31555);

INSERT INTO SupportTicket (TicketID, Status, DateOpen, DateClose, CustomerID, PropertyID)

```
VALUES ('T-23745', 'Open', '2023-02-12', NULL, 'CD54633', 14290);
      INSERT INTO
                       SupportTicket (TicketID, Status, DateOpen, DateClose,
CustomerID, PropertyID)
VALUES ('T-34852', 'Closed', '2022-10-04', '2022-10-24', 'PE347431', 31902);
4. AirbnbAgent TABLE
CREATE TABLE AirbnbAgent (
      AgentID VARCHAR(50),
      TicketID VARCHAR(50)
      );
AirbnbAgent DATA
      INSERT INTO AirbnbAgent (AgentID, TicketID)
      VALUES ('A-1294', 'T-74632');
      INSERT INTO AirbnbAgent (AgentID, TicketID)
      VALUES ('A-1372', 'T-23447');
      INSERT INTO AirbnbAgent (AgentID, TicketID)
      VALUES ('A-8234', 'T-12458');
      INSERT INTO AirbnbAgent (AgentID, TicketID)
      VALUES ('A-1372', 'T-29346');
      INSERT INTO AirbnbAgent (AgentID, TicketID)
      VALUES ('A-8234', 'T-24785');
      INSERT INTO AirbnbAgent (AgentID, TicketID)
      VALUES ('A-1294', 'T-23745');
```

```
INSERT INTO AirbnbAgent (AgentID, TicketID)
      VALUES ('A-1294', 'T-34852');
5. Invoice TABLE
CREATE TABLE Invoice (
        InvoiceID VARCHAR(10) NOT PULL PRIMARY KEY,
        Amount DECIMAL(10, 2),
        TotalPointsEarned INT.
        PropertyID INT,
        DaysReserved INT,
        CustomerID VARCHAR(10)
      );
Invoice DATA
      INSERT INTO Invoice (InvoiceID, Amount, TotalPointsEarned, PropertyID,
DaysReserved, CustomerID)
      VALUES ('Inv-8973', 825.00, 825, 12937, 3, 'GK12345');
      INSERT INTO Invoice (InvoiceID, Amount, TotalPointsEarned, PropertyID,
DaysReserved, CustomerID)
      VALUES ('Inv-4564', 150.00, 150, 12940, 2, 'TO83464');
      INSERT INTO Invoice (InvoiceID, Amount, TotalPointsEarned, PropertyID,
DaysReserved, CustomerID)
      VALUES ('Inv-1091', 120.00, 120, 31130, 2, 'CD54633');
      INSERT INTO Invoice (InvoiceID, Amount, TotalPointsEarned, PropertyID,
DaysReserved, CustomerID)
      VALUES ('Inv-4910', 68.00, 68, 11943, 1, 'CV34827');
```

INSERT INTO Invoice (InvoiceID, Amount, TotalPointsEarned, PropertyID,

DaysReserved, CustomerID)

VALUES ('Inv-6271', 1050.00, 1050, 13808, 6, 'RR27346');

INSERT INTO Invoice (InvoiceID, Amount, TotalPointsEarned, PropertyID, DaysReserved, CustomerID)

VALUES ('Inv-2869', 195.00, 195, 12192, 3, 'DN34572');

INSERT INTO Invoice (InvoiceID, Amount, TotalPointsEarned, PropertyID, DaysReserved, CustomerID)

VALUES ('Inv-8120', 248.00, 248, 29683, 2, 'SA23746');

INSERT INTO Invoice (InvoiceID, Amount, TotalPointsEarned, PropertyID, DaysReserved, CustomerID)

VALUES ('Inv-0979', 136.00, 136, 61509, 2, 'VS05643');

INSERT INTO Invoice (InvoiceID, Amount, TotalPointsEarned, PropertyID, DaysReserved, CustomerID)

VALUES ('Inv-1436', 220.00, 220, 31555, 1, 'MD2346');

INSERT INTO Invoice (InvoiceID, Amount, TotalPointsEarned, PropertyID, DaysReserved, CustomerID) VALUES ('Inv-8689', 62.00, 62, 14290, 1, 'AG54472');

INSERT INTO Invoice (InvoiceID, Amount, TotalPointsEarned, PropertyID, DaysReserved, CustomerID) VALUES ('Inv-0926', 450.00, 450, 62427, 3, 'RR27346');

INSERT INTO Invoice (InvoiceID, Amount, TotalPointsEarned, PropertyID, DaysReserved, CustomerID) VALUES ('Inv-1738', 790.00, 790, 14314, 2, 'RA38543');

INSERT INTO Invoice (InvoiceID, Amount, TotalPointsEarned, PropertyID, DaysReserved, CustomerID)

VALUES ('Inv-8276', 190.00, 190, 31902, 2, 'CV34563');

INSERT INTO Invoice (InvoiceID, Amount, TotalPointsEarned, PropertyID, DaysReserved, CustomerID)

VALUES ('Inv-5647', 384.00, 384, 31994, 4, 'DN34572');

INSERT INTO Invoice (InvoiceID, Amount, TotalPointsEarned, PropertyID, DaysReserved, CustomerID)

VALUES ('Inv-3774', 350.00, 350, 62925, 2, 'PE347431');

# Part 5: MS Access: Forms, Reports, Queries, Menus/Navigation form.

# 1. Forms

#### i. PropertyHosts Form

Property Hosts form can be used to add or edit details of the Property host or renter or owner of the properties which are hosted on the Airbnb website.



# ii. SpaceHosted Form

Space hosted form can be used to add or edit details of space hosted or property that are available for clients to rent.



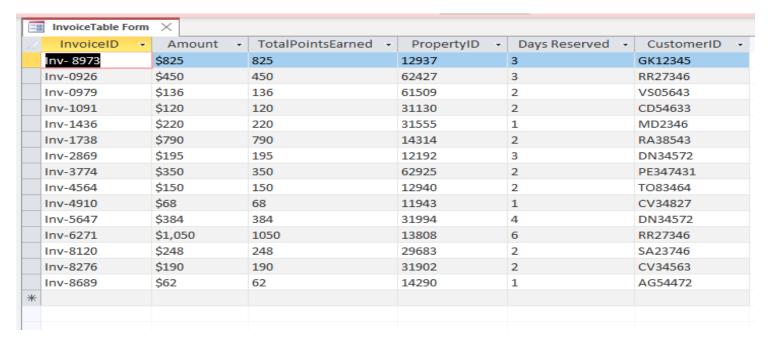
#### iii. EndClientsCustomer Form

EndClientsCustomer form can be used to add/edit details of customers who make reservations on the Airbnb website.



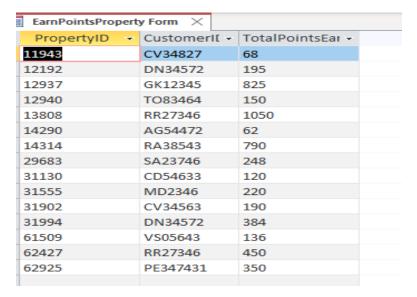
#### iv. InvoiceTable Form

An invoice table form can be used to add/edit details of invoices after a customer rents a property.



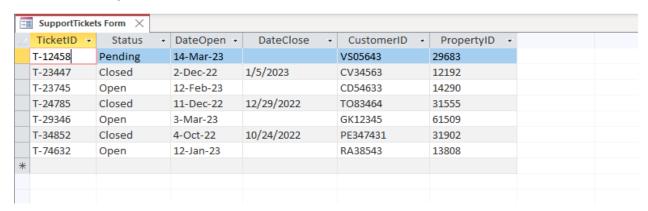
#### v. EarnPointsProperty Form

EarnPointsProperty form can be used to add/edit total points earned by a customer when they rent a particular property



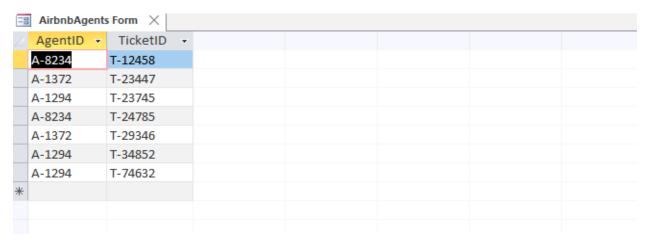
# vi. Support Tickets Form

Support Tickets form can be used to add/edit support tickets for the complaints raised by customers.



# vii. Airbnb Agents Form

Airbnb Agents form can be used to add/edit agentID who are assigned support tickets.



# 2. Reports

# i. PropertyHosts Report

PropertyHosts report can be used to display the information of all the Properties owners whose properties are listed on Airbnb for renting.

| Pro | PropertyHosts Report \ |           |          |                          |                  |                      |       |              |            |             |
|-----|------------------------|-----------|----------|--------------------------|------------------|----------------------|-------|--------------|------------|-------------|
|     |                        |           |          |                          |                  |                      |       |              |            |             |
| Pr  | PropertyHosts Report   |           |          |                          |                  |                      |       |              |            |             |
| Но  | stID                   | FirstName | LastName | HouseNo                  | City             | State                | Zip   | Contact      | PropertyID | BankAccount |
| 28  | 45                     | Jennifer  | Lara     | 55928 Springview Way     | Moreno Valley    | California           | 92555 | 951-621-7417 | 13808      | 311387825   |
| 73  | 56                     | Garon     | Orestes  | 97043 Hanover Drive      | Fullerton        | California           | 92835 | 714-572-7329 | 31130      | 777549789   |
| 73  | 78                     | Rebecca   | Laurie   | 17 Mariners Cove Pass    | San Antonio      | Texas                | 78245 | 210-486-4296 | 12937      | 871692204   |
| 74  | 90                     | Mary      | Teri     | 3772 Delladonna Trail    | San Jose         | California           | 95118 | 408-909-3613 | 12940      | 686644819   |
| 89  | 67                     | Shunichi  | Adreinne | 98809 Alpine Point       | Saint Petersburg | Florida              | 33705 | 727-255-5756 | 11943      | 478751692   |
| 97  | 44                     | Laurie    | Tiziana  | 81 Meadow Vale Court     | San Antonio      | Texas                | 78205 | 210-675-2514 | 29683      | 337220334   |
| 15  | 991                    | Allen     | Edward   | 5 Morning Alley          | Temple           | Texas                | 76505 | 254-317-7300 | 61509      | 935956477   |
| 16  | 104                    | Kae       | Harriet  | 79913 Goodland Drive     | San Antonio      | Texas                | 78245 | 210-657-1100 | 12192      | 534668021   |
| 16  | 800                    | Cyn       | Fonzy    | 92902 Fieldstone Junctic | Pensacola        | Florida              | 32595 | 850-484-0176 | 14290      | 622615441   |
| 17  | 297                    | Joelle    | Brie     | 78 Debra Trail           | Washington       | District of Columbia | 20010 | 202-823-9309 | 31902      | 564715069   |
| 17  | 571                    | Jane      | Uli      | 57 Montana Center        | Washington       | District of Columbia | 20210 | 202-777-9085 | 31555      | 749660160   |

# ii. SpaceHosted Report

3305 Ridgeview Terrace

69 Karstens Terrace

37 Pankratz Road

709 Sugar Park

James

Tom

Sunder

Jeanne

21207

25183

30193

35935

Chaya

Tommi

Angela

Nathalie

SpaceHosted report shows all the properties listed on Airbnb for renting.

California

California

California

Texas

92191

77035

619-454-4458

951-734-5455

713-976-3036

530-130-5865

14314

62427

62925

888376182

991063120

San Diego

Corona

Houston

Chico

| SpaceHosted Report |              |                            |           |                    |                    |           |                         |  |
|--------------------|--------------|----------------------------|-----------|--------------------|--------------------|-----------|-------------------------|--|
| PropertyID         | PropertyType | PropertyDescription        | Boroughs  | Neighbourhood      | Available_365 days | Price/Day | Amenities               |  |
| 11943              | Town house   | Large Furnished townhou    | Manhattan | Midtown            | 79                 | \$68      | Parking, washer & dryer |  |
| 12192              | Cabin        | Uptown Sanctuary w/ Priv   | Manhattan | East Harlem        | 300                | \$65      | Pets allowed            |  |
| 12937              | Duplex       | Spacious Brooklyn Duplex   | Brooklyn  | Sunset Park        | 267                | \$275     | Pool, parking           |  |
| 12940              | Apartments   | Cozy Clean Apt             | Manhattan | Upper West Side    | 15                 | \$75      | Garden, Wifi            |  |
| 13808              | Loft         | Skylit Midtown Castle      | Manhattan | Midtown            | 365                | \$175     | Wifi                    |  |
| 14290              | Shared rooms | UES Beautiful Blue Room    | Manhattan | East Harlem        | 308                | \$62      | Garden                  |  |
| 14314              | Loft         | Sweet and Spacious Brool   | Brooklyn  | Williamsburg       | 332                | \$395     | Parking, board games    |  |
| 29683              | Villas       | Lovely house 1 in BEST AR  | Brooklyn  | South Slope        | 163                | \$124     | Water front             |  |
| 31130              | Shared rooms | BlissArtsSpace             | Brooklyn  | Bedford-Stuyvesant | 322                | \$60      | Parking, garden         |  |
| 31555              | Studio       | Perfect for Your Parents   | Brooklyn  | Fort Greene        | 38                 | \$220     | Security camera         |  |
| 31902              | Apartments   | Wburg. Large, bright & tra | Brooklyn  | Williamsburg       | 24                 | \$95      | Kitchen                 |  |
| 31994              | Duplex       | Large B&B Style rooms      | Brooklyn  | Bedford-Stuyvesant | 232                | \$96      | Parking, fire place     |  |
| 61509              | Cottages     | Only 2 stops to Manhattar  | Brooklyn  | Williamsburg       | 151                | \$68      | TV, Security camera     |  |
| 62427              | Cabin        | luminous cabins            | Brooklyn  | Bedford-Stuyvesant | 316                | \$150     | Backyard barbeque grill |  |
| 62925              | Apartments   | Midtown Pied-a-terre       | Manhattan | Hell's Kitchen     | 60                 | \$175     | Balcony                 |  |

# iii. EndClientsCustomer Report

EndClientsCustomer report shows the information of all customers who have made reservations on Airbnb.

| EndClients | EndClientsCustomer Report |          |            |                      |                 |             |       |              |  |
|------------|---------------------------|----------|------------|----------------------|-----------------|-------------|-------|--------------|--|
| CustomerID | FirstName                 | LastName | DOB        | HouseNo              | City            | State       | Zip   | Contact      |  |
| AG54472    | Alex                      | Gus      | 11/14/1979 | 10 Schurz Circle     | Fresno          | California  | 93721 | 559-962-1649 |  |
| CD54633    | Cristina                  | David    | 5/11/1982  | 8 Hovde Alley        | Memphis         | Tennessee   | 38188 | 901-235-0421 |  |
| CV34563    | Casey                     | Victoria | 12/13/1978 | 40876 Parkside Place | San Diego       | California  | 92176 | 619-688-1842 |  |
| CV34827    | Carol                     | Viviana  | 6/30/1975  | 50459 Lyons Road     | Tallahassee     | Florida     | 32309 | 850-950-4810 |  |
| DN34572    | Dimitri                   | Niya     | 3/4/1975   | 4560 Rigney Park     | New Haven       | Connecticut | 6520  | 203-384-4926 |  |
| GK12345    | Garon                     | Karene   | 1/9/1976   | 5 Ridgeway Hill      | San Diego       | California  | 92137 | 619-277-4801 |  |
| MD2346     | Ming                      | Debbie   | 10/8/1990  | 498 Loeprich Avenu   | Miami           | Florida     | 33261 | 305-257-9030 |  |
| PE347431   | Petra                     | Edward   | 8/3/1989   | 15358 Bunting Way    | San Jose        | California  | 95150 | 408-411-4151 |  |
| RA38543    | Rene                      | Anthony  | 3/15/1989  | 3 Cottonwood Place   | Bakersfield     | California  | 93381 | 661-374-8317 |  |
| RR27346    | Reka                      | Robin    | 10/21/1978 | 76 Crowley Road      | Whittier        | California  | 90610 | 562-692-0458 |  |
| SA23746    | Sahr                      | Anna     | 10/6/1991  | 20454 Granby Point   | West Palm Beach | Florida     | 33421 | 561-290-6792 |  |
| TO83464    | Ted                       | Olivia   | 3/19/1982  | 1457 Bashford Parkv  | Orlando         | Florida     | 32813 | 321-564-3219 |  |
| VS05643    | Vie                       | Sarah    | 2/12/1977  | 5632 Goodland Cent   | Oceanside       | California  | 92056 | 858-268-6345 |  |

# iv. InvoiceTable Report

InvoiceTable report shows all invoices along with invoice amount and corresponding points earned by each customer.

| InvoiceTabl | InvoiceTable Report |              |            |            |            |  |  |  |
|-------------|---------------------|--------------|------------|------------|------------|--|--|--|
| InvoiceID   | Amount              | TotalPointsE | PropertyID | Days Reser | CustomerID |  |  |  |
| Inv- 8973   | \$825               | 825          | 12937      | 3          | GK12345    |  |  |  |
| Inv-0926    | \$450               | 450          | 62427      | 3          | RR27346    |  |  |  |
| Inv-0979    | \$136               | 136          | 61509      | 2          | VS05643    |  |  |  |
| Inv-1091    | \$120               | 120          | 31130      | 2          | CD54633    |  |  |  |
| Inv-1436    | \$220               | 220          | 31555      | 1          | MD2346     |  |  |  |
| Inv-1738    | \$790               | 790          | 14314      | 2          | RA38543    |  |  |  |
| Inv-2869    | \$195               | 195          | 12192      | 3          | DN34572    |  |  |  |
| Inv-3774    | \$350               | 350          | 62925      | 2          | PE347431   |  |  |  |
| Inv-4564    | \$150               | 150          | 12940      | 2          | TO83464    |  |  |  |
| Inv-4910    | \$68                | 68           | 11943      | 1          | CV34827    |  |  |  |
| Inv-5647    | \$384               | 384          | 31994      | 4          | DN34572    |  |  |  |
| Inv-6271    | \$1,050             | 1050         | 13808      | 6          | RR27346    |  |  |  |
| Inv-8120    | \$248               | 248          | 29683      | 2          | SA23746    |  |  |  |
| Inv-8276    | \$190               | 190          | 31902      | 2          | CV34563    |  |  |  |
| Inv-8689    | \$62                | 62           | 14290      | 1          | AG54472    |  |  |  |

# v. EarnPointsProperty Report

EarnPointsProperty report shows the total points earned by each customer when they reserve a property and pay the invoice amount.

| EarnPointsProperty Report |            |                   |  |  |  |  |  |
|---------------------------|------------|-------------------|--|--|--|--|--|
| PropertyID                | CustomerID | TotalPointsEarned |  |  |  |  |  |
| 11943                     | CV34827    | 68                |  |  |  |  |  |
| 12192                     | DN34572    | 195               |  |  |  |  |  |
| 12937                     | GK12345    | 825               |  |  |  |  |  |
| 12940                     | TO83464    | 150               |  |  |  |  |  |
| 13808                     | RR27346    | 1050              |  |  |  |  |  |
| 14290                     | AG54472    | 62                |  |  |  |  |  |
| 14314                     | RA38543    | 790               |  |  |  |  |  |
| 29683                     | SA23746    | 248               |  |  |  |  |  |
| 31130                     | CD54633    | 120               |  |  |  |  |  |
| 31555                     | MD2346     | 220               |  |  |  |  |  |
| 31902                     | CV34563    | 190               |  |  |  |  |  |
| 31994                     | DN34572    | 384               |  |  |  |  |  |
| 61509                     | VS05643    | 136               |  |  |  |  |  |
| 62427                     | RR27346    | 450               |  |  |  |  |  |
| 62925                     | PE347431   | 350               |  |  |  |  |  |

# vi. SupportTickets Report

SupportTickets report shows the information of all support tickets for the complaints raised by customers concerning issues with rented property.

| SupportTi | SupportTickets Report |           |            |            |            |  |  |  |  |
|-----------|-----------------------|-----------|------------|------------|------------|--|--|--|--|
| TicketID  | Status                | DateOpen  | DateClose  | CustomerID | PropertyID |  |  |  |  |
| T-12458   | Pending               | 14-Mar-23 |            | VS05643    | 29683      |  |  |  |  |
| T-23447   | Closed                | 2-Dec-22  | 1/5/2023   | CV34563    | 12192      |  |  |  |  |
| T-23745   | Open                  | 12-Feb-23 |            | CD54633    | 14290      |  |  |  |  |
| T-24785   | Closed                | 11-Dec-22 | 12/29/2022 | TO83464    | 31555      |  |  |  |  |
| T-29346   | Open                  | 3-Mar-23  |            | GK12345    | 61509      |  |  |  |  |
| T-34852   | Closed                | 4-Oct-22  | 10/24/2022 | PE347431   | 31902      |  |  |  |  |

# vii. AirbnbAgents Report

T-34852

A-1294

AirbnbAgents report shows the information of Airbnb Agents who are responsible for handling support tickets.

| AirbnbAgents Report |          |  |  |  |  |  |  |  |  |
|---------------------|----------|--|--|--|--|--|--|--|--|
| AgentID             | TicketID |  |  |  |  |  |  |  |  |
| A-1294              | T-74632  |  |  |  |  |  |  |  |  |
| A-1372              | T-23447  |  |  |  |  |  |  |  |  |
| A-8234              | T-12458  |  |  |  |  |  |  |  |  |
| A-1372              | T-29346  |  |  |  |  |  |  |  |  |
| A-8234              | T-24785  |  |  |  |  |  |  |  |  |
| A-1294              | T-23745  |  |  |  |  |  |  |  |  |

# 3. Queries

#### i. PropertyHosts California

This query shows a list of all the names and addresses of Property owners in California.

SELECT FirstName, LastName, HouseNo

FROM PropertyHosts

WHERE State='California';



#### ii. SpaceHosted Brooklyn

This query shows a list of the properties in Brooklyn which are available for more than 90 days in a year.

SELECT PropertyID, PropertyType, Boroughs, Amenities, [Available\_365 days]

FROM SpaceHosted

WHERE Boroughs = 'Brooklyn' AND [Available\_365 days] > 90;



#### iii. EndClients California

This guery shows all information of the customers living in California.

SELECT \*

FROM EndClientsCustomer

WHERE State = 'California';



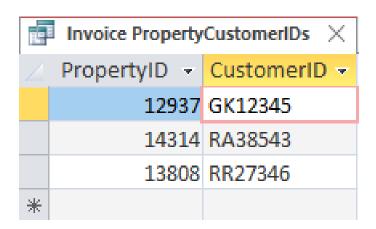
# iv. Invoice PropertyCustomerIDs

This query shows Customers (along with their rented properties) whose invoice amount is greater than 500.

SELECT PropertyID, CustomerID

FROM InvoiceTable

WHERE Amount>500;

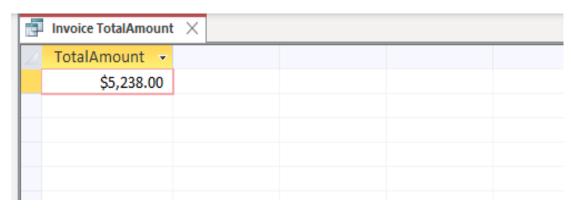


#### v. Invoice TotalAmount

This query shows the total invoice amount from the invoice table.

SELECT SUM(Amount) AS TotalAmount

FROM InvoiceTable;



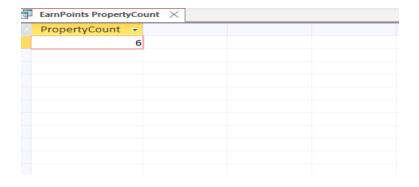
# vi. EarnPoints Property Count

This query shows the properties count by which customers earned more than 300 reward points.

SELECT COUNT(TotalPointsEarned) AS PropertyCount

FROM EarnPointsProperty

WHERE TotalPointsEarned>300;



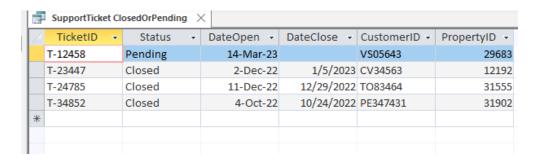
#### vii. SupportTicket ClosedOrPending

This query shows a list of support tickets that are either closed or pending.

**SELECT**\*

FROM SupportTickets

WHERE Status = 'Closed' OR Status = 'Pending';



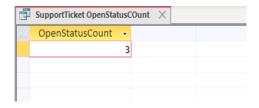
# viii. SupportTicket OpenStatusCount

This query shows a count of support tickets that are in Open status.

SELECT COUNT(Status) AS OpenStatusCount

FROM SupportTickets

WHERE Status='Open';

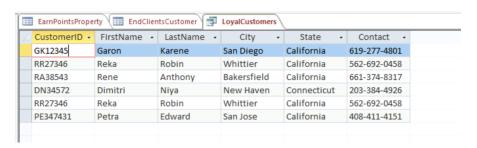


# ix. Loyal Customers

This query shows the customers' details having more than 300 earned points. It combines 2 tables.

SELECT e.CustomerID, FirstName, LastName, City, State, Contact FROM EarnPointsProperty AS e, EndClientsCustomer AS c

WHERE TotalPointsEarned>300 and e.CustomerID = c.Custom



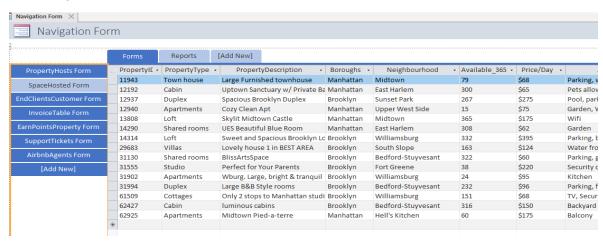
# 4. Navigation Form

The navigation form provides a starting place with access to all of the forms and reports in logical groupings. Below is the screenshot of each of the components of the Navigation form.

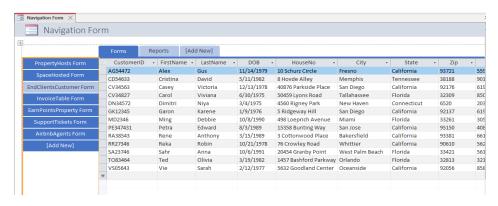
# i. PropertyHosts Form



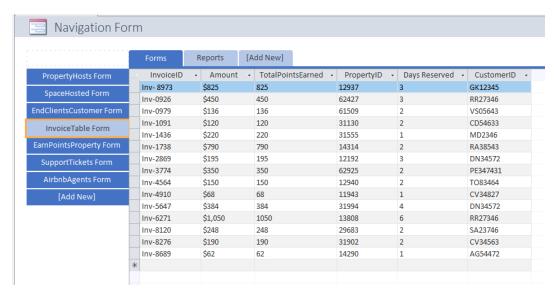
# ii. SpaceHosted Form



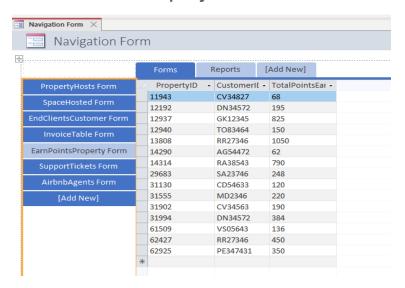
#### iii. EndClientsCustomer Form



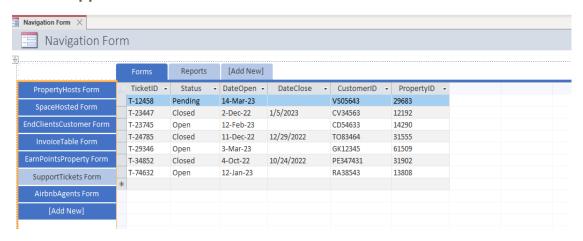
#### iv. InvoiceTable Form



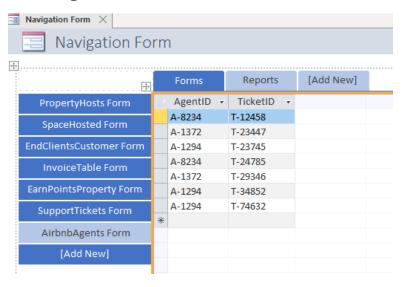
# v. EarnPointsProperty Form



# vi. SupportTickets Form



# vii. AirbnbAgents Form

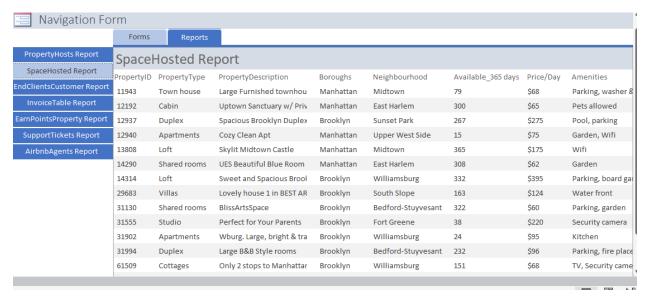


# viii. PropertyHosts Report



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# ix. SpaceHosted Report



#### x. EndClientsCustomer Report



#### xi. InvoiceTable Report



# xii. EarnPointsProperty Report



# xiii. SupportTickets Report



#### xiv. AirbnbAgents Report

