In [1]: 
```
! pip install PyMySQL
! pip install ipython-sql
! pip install mysqlclient
```

Requirement already satisfied: PyMySQL in d:\anaconda\lib\site-packages
(1.1.0)
Requirement already satisfied: ipython-sql in d:\anaconda\lib\site-package
s (0.5.0)
Requirement already satisfied: ipython-genutils in d:\anaconda\lib\site-pa
ckages (from ipython-sql) (0.2.0)
Requirement already satisfied: sqlparse in d:\anaconda\lib\site-packages
(from ipython-sql) (0.4.4)
Requirement already satisfied: sqlalchemy>=2.0 in d:\anaconda\lib\site-pac
kages (from ipython-sql) (2.0.23)
Requirement already satisfied: ipython in d:\anaconda\lib\site-packages (f
rom ipython-sql) (8.4.0)
Requirement already satisfied: six in d:\anaconda\lib\site-packages (from
ipython-sql) (1.16.0)
Requirement already satisfied: prettytable in d:\anaconda\lib\site-package
s (from ipython-sql) (3.9.0)
Requirement already satisfied: typing-extensions>=4.2.0 in d:\anaconda\lib
\site-packages (from sqlalchemy>=2.0->ipython-sql) (4.3.0)
Requirement already satisfied: greenlet!=0.4.17 in d:\anaconda\lib\site-pa
ckages (from sqlalchemy>=2.0->ipython-sql) (1.1.1)
Requirement already satisfied: stack-data in d:\anaconda\lib\site-packages
(from ipython->ipython-sql) (0.2.0)
Requirement already satisfied: matplotlib-inline in d:\anaconda\lib\site-p
ackages (from ipython->ipython-sql) (0.1.6)
Requirement already satisfied: traitlets>=5 in d:\anaconda\lib\site-packag
es (from ipython->ipython-sql) (5.1.1)
Requirement already satisfied: prompt-toolkit!=3.0.0,!=3.0.1,<3.1.0,>=2.0.
0 in d:\anaconda\lib\site-packages (from ipython->ipython-sql) (3.0.20)
Requirement already satisfied: jedi>=0.16 in d:\anaconda\lib\site-packages
(from ipython->ipython-sql) (0.17.2)
Requirement already satisfied: pygments>=2.4.0 in d:\anaconda\lib\site-pac
kages (from ipython->ipython-sql) (2.11.2)
Requirement already satisfied: pickleshare in d:\anaconda\lib\site-package
s (from ipython->ipython-sql) (0.7.5)
Requirement already satisfied: decorator in d:\anaconda\lib\site-packages
(from ipython->ipython-sql) (5.1.1)
Requirement already satisfied: colorama in d:\anaconda\lib\site-packages
(from ipython->ipython-sql) (0.4.5)
Requirement already satisfied: backcall in d:\anaconda\lib\site-packages
(from ipython->ipython-sql) (0.2.0)
Requirement already satisfied: setuptools>=18.5 in d:\anaconda\lib\site-pa
ckages (from ipython->ipython-sql) (63.4.1)
Requirement already satisfied: wcwidth in d:\anaconda\lib\site-packages (f
rom prettytable->ipython-sql) (0.2.5)
Requirement already satisfied: parso<0.8.0,>=0.7.0 in d:\anaconda\lib\site
-packages (from jedi>=0.16->ipython->ipython-sql) (0.7.0)
Requirement already satisfied: pure-eval in d:\anaconda\lib\site-packages
(from stack-data->ipython->ipython-sql) (0.2.2)
Requirement already satisfied: executing in d:\anaconda\lib\site-packages
(from stack-data->ipython->ipython-sql) (0.8.3)
Requirement already satisfied: asttokens in d:\anaconda\lib\site-packages
(from stack-data->ipython->ipython-sql) (2.0.5)
Requirement already satisfied: mysqlclient in d:\anaconda\lib\site-package
s (2.2.0)

In [2]:
```python
import pymysql
import pandas as pd
```

In [3]:
```python
!pip install ipython-sql
```

```
Requirement already satisfied: ipython-sql in d:\anaconda\lib\site-package
s (0.5.0)
Requirement already satisfied: sqlparse in d:\anaconda\lib\site-packages
(from ipython-sql) (0.4.4)
Requirement already satisfied: ipython-genutils in d:\anaconda\lib\site-pa
ckages (from ipython-sql) (0.2.0)
Requirement already satisfied: prettytable in d:\anaconda\lib\site-package
s (from ipython-sql) (3.9.0)
Requirement already satisfied: sqlalchemy>=2.0 in d:\anaconda\lib\site-pac
kages (from ipython-sql) (2.0.23)
Requirement already satisfied: six in d:\anaconda\lib\site-packages (from
ipython-sql) (1.16.0)
Requirement already satisfied: ipython in d:\anaconda\lib\site-packages (f
rom ipython-sql) (8.4.0)
Requirement already satisfied: greenlet!=0.4.17 in d:\anaconda\lib\site-pa
ckages (from sqlalchemy>=2.0->ipython-sql) (1.1.1)
Requirement already satisfied: typing-extensions>=4.2.0 in d:\anaconda\lib
\site-packages (from sqlalchemy>=2.0->ipython-sql) (4.3.0)
Requirement already satisfied: stack-data in d:\anaconda\lib\site-packages
(from ipython->ipython-sql) (0.2.0)
Requirement already satisfied: matplotlib-inline in d:\anaconda\lib\site-p
ackages (from ipython->ipython-sql) (0.1.6)
Requirement already satisfied: setuptools>=18.5 in d:\anaconda\lib\site-pa
ckages (from ipython->ipython-sql) (63.4.1)
Requirement already satisfied: decorator in d:\anaconda\lib\site-packages
(from ipython->ipython-sql) (5.1.1)
Requirement already satisfied: prompt-toolkit!=3.0.0,!=3.0.1,<3.1.0,>=2.0.
0 in d:\anaconda\lib\site-packages (from ipython->ipython-sql) (3.0.20)
Requirement already satisfied: pygments>=2.4.0 in d:\anaconda\lib\site-pac
kages (from ipython->ipython-sql) (2.11.2)
Requirement already satisfied: jedi>=0.16 in d:\anaconda\lib\site-packages
(from ipython->ipython-sql) (0.17.2)
Requirement already satisfied: colorama in d:\anaconda\lib\site-packages
(from ipython->ipython-sql) (0.4.5)
Requirement already satisfied: pickleshare in d:\anaconda\lib\site-package
s (from ipython->ipython-sql) (0.7.5)
Requirement already satisfied: traitlets>=5 in d:\anaconda\lib\site-packag
es (from ipython->ipython-sql) (5.1.1)
Requirement already satisfied: backcall in d:\anaconda\lib\site-packages
(from ipython->ipython-sql) (0.2.0)
Requirement already satisfied: wcwidth in d:\anaconda\lib\site-packages (f
rom prettytable->ipython-sql) (0.2.5)
Requirement already satisfied: parso<0.8.0,>=0.7.0 in d:\anaconda\lib\site
-packages (from jedi>=0.16->ipython->ipython-sql) (0.7.0)
Requirement already satisfied: asttokens in d:\anaconda\lib\site-packages
(from stack-data->ipython->ipython-sql) (2.0.5)
Requirement already satisfied: executing in d:\anaconda\lib\site-packages
(from stack-data->ipython->ipython-sql) (0.8.3)
Requirement already satisfied: pure-eval in d:\anaconda\lib\site-packages
(from stack-data->ipython->ipython-sql) (0.2.2)
```

In [4]:
```python
%load_ext sql
```

In [43]:
```python
db_name = "housing_system"
db_host = "localhost"
db_username = "root"
db_password = "root"

try:
    conn = pymysql.connect(host = db_host,
                           port = int(3306),
                           user = "root",
                           password = db_password,
                           db = db_name)
except e:
    print (e)
if conn:
    print ("connection successful")
else:
        print ("error")
```

connection successful

In [60]:
```python
import pymysql

# Replace with your MySQL database configuration
db_host = "localhost"
db_user = "root"  # Replace with your MySQL username
db_password = "root"  # Replace with your MySQL password
db_name = "housing_system"

try:
    # Connect to MySQL
    conn = pymysql.connect(host=db_host, user=db_user, password=db_password
    print("Connection successful")

    # Execute the query
    with conn.cursor() as cursor:
        cursor.execute("SHOW DATABASES;")
        result = cursor.fetchall()

        # Display the result
        for row in result:
            print(row)

except pymysql.Error as e:
    print(f"Error: {e}")
```

Connection successful
('awesome chocolates',)
('housing_system',)
('information_schema',)
('mysql',)
('performance_schema',)
('purchase',)
('sys',)

In [61]:
```python
from sqlalchemy import create_engine, inspect

# Replace with your MySQL database configuration
db_host = "localhost"
db_user = "root"  # Replace with your MySQL username
db_password = "root"  # Replace with your MySQL password
db_name = "housing_system"

# Create a SQLAlchemy engine
engine = create_engine(f"mysql+pymysql://{db_user}:{db_password}@{db_host}/

# Create an inspector
inspector = inspect(engine)

# Get table names
tables = inspector.get_table_names()

# Display the tables
print("Tables in the housing_system database:")
for table in tables:
    print(table)
```

```
Tables in the housing_system database:
agent
contract
lease_agreement
location
maintenance_request
owner
payment
property
property_image
review
tenant
user
```

In [31]:
```python
pip install sqlalchemy
```

```
Requirement already satisfied: sqlalchemy in d:\anaconda\lib\site-packages
(2.0.23)
Requirement already satisfied: typing-extensions>=4.2.0 in d:\anaconda\lib
\site-packages (from sqlalchemy) (4.3.0)
Requirement already satisfied: greenlet!=0.4.17 in d:\anaconda\lib\site-pa
ckages (from sqlalchemy) (1.1.1)
Note: you may need to restart the kernel to use updated packages.
```

In [62]:

```python
tables_query = "SHOW TABLES;"
tables_df = pd.read_sql_query(tables_query, conn)

print(tables_df)
```

```
    Tables_in_housing_system
0                      agent
1                   contract
2            lease_agreement
3                   location
4        maintenance_request
5                      owner
6                    payment
7                   property
8             property_image
9                     review
10                    tenant
11                      user
```

```
C:\Users\Hp\AppData\Local\Temp\ipykernel_7104\1574528850.py:3: UserWarnin
g: pandas only supports SQLAlchemy connectable (engine/connection) or data
base string URI or sqlite3 DBAPI2 connection. Other DBAPI2 objects are not
tested. Please consider using SQLAlchemy.
  tables_df = pd.read_sql_query(tables_query, conn)
```

In [63]:
```python
df = pd.read_sql_query("select * from agent", conn)
df
```

C:\Users\Hp\AppData\Local\Temp\ipykernel_7104\224335580.py:1: UserWarning:
pandas only supports SQLAlchemy connectable (engine/connection) or databas
e string URI or sqlite3 DBAPI2 connection. Other DBAPI2 objects are not te
sted. Please consider using SQLAlchemy.
  df = pd.read_sql_query("select * from agent", conn)

Out[63]:

|    | agent_id | lease_agreement_id | contact_number | services_offered |
|----|----------|--------------------|-----------------|------------------|
| 0  | 1        | 1                  | 158-785-9731    | Home Valuation |
| 1  | 3        | 3                  | 770-420-7624    | Negotiation Assistance |
| 2  | 4        | 4                  | 599-434-6820    | Home Valuation |
| 3  | 6        | 6                  | 819-292-6541    | Relocation Services |
| 4  | 7        | 7                  | 188-472-7525    | Property Tours |
| 5  | 8        | 8                  | 134-645-0247    | Documentation Handling |
| 6  | 13       | 13                 | 845-707-9712    | Property Tours |
| 7  | 14       | 14                 | 621-994-9567    | Documentation Handling |
| 8  | 19       | 19                 | 548-771-8431    | Documentation Handling |
| 9  | 20       | 20                 | 360-612-1501    | Documentation Handling |
| 10 | 22       | 22                 | 435-656-8226    | Legal Assistance |
| 11 | 24       | 24                 | 199-789-6494    | Relocation Services |
| 12 | 28       | 28                 | 511-664-0122    | Home Valuation |
| 13 | 30       | 30                 | 925-897-7736    | Home Valuation |
| 14 | 35       | 35                 | 991-837-7476    | Documentation Handling |
| 15 | 39       | 39                 | 532-500-3970    | Property Tours |
| 16 | 40       | 40                 | 676-471-0384    | Market Analysis and Research |
| 17 | 41       | 41                 | 882-267-3673    | Negotiation Assistance |
| 18 | 42       | 42                 | 470-238-0932    | Negotiation Assistance |
| 19 | 45       | 45                 | 473-363-9924    | Legal Assistance |
| 20 | 47       | 47                 | 204-442-3463    | Documentation Handling |
| 21 | 48       | 48                 | 255-981-3568    | Property Tours |
| 22 | 51       | 51                 | 947-241-7653    | Market Analysis and Research |
| 23 | 52       | 52                 | 996-434-4773    | Documentation Handling |
| 24 | 55       | 55                 | 108-203-4454    | Legal Assistance |
| 25 | 56       | 56                 | 119-860-1027    | Documentation Handling |
| 26 | 58       | 58                 | 216-175-9675    | Investment Guidance |
| 27 | 62       | 62                 | 522-363-7748    | Client Representation |
| 28 | 65       | 65                 | 960-615-7594    | Investment Guidance |
| 29 | 68       | 68                 | 891-995-9892    | Market Analysis and Research |
| 30 | 69       | 69                 | 687-860-9609    | Documentation Handling |

In [37]:
```python
df = pd.read_sql_query("select * from property", conn)
df
```

C:\Users\Hp\AppData\Local\Temp\ipykernel_7104\1695097826.py:1: UserWarning: pandas only supports SQLAlchemy connectable (engine/connection) or database string URI or sqlite3 DBAPI2 connection. Other DBAPI2 objects are not tested. Please consider using SQLAlchemy.
  df = pd.read_sql_query("select * from property", conn)

Out[37]:

|    | property_id | owner_id | address | size | rooms | amenities |
|----|-------------|----------|---------|------|-------|-----------|
| 0  | 1  | 1  | 640 Arizona Circle | 1  | 1  | Dishwasher |
| 1  | 3  | 3  | 65336 Evergreen Parkway | 3  | 3  | Patio |
| 2  | 4  | 4  | 5461 Nancy Trail | 4  | 4  | Tennis court |
| 3  | 6  | 6  | 34 Arrowood Point | 6  | 6  | Dishwasher |
| 4  | 7  | 7  | 95 Pierstorff Avenue | 7  | 7  | Swimming pool |
| 5  | 8  | 8  | 7 Westend Street | 8  | 8  | Fitness center |
| 6  | 13 | 13 | 8045 Magdeline Crossing | 13 | 13 | air conditioning |
| 7  | 14 | 14 | 3737 Riverside Terrace | 14 | 14 | Bathroom |
| 8  | 19 | 19 | 02 Morningstar Circle | 19 | 19 | Laundry |
| 9  | 20 | 20 | 523 Maple Pass | 20 | 20 | Fitness center |
| 10 | 22 | 22 | 6 Walton Drive | 22 | 22 | Lighting |
| 11 | 24 | 24 | 69674 Saint Paul Lane | 24 | 24 | Wood flooring |
| 12 | 28 | 28 | 25 Coolidge Center | 28 | 28 | Laundry |
| 13 | 30 | 30 | 5220 Oak Crossing | 30 | 30 | Dishwasher |
| 14 | 35 | 35 | 0263 Mockingbird Plaza | 35 | 35 | Bathroom |
| 15 | 39 | 39 | 99554 Bunting Road | 39 | 39 | Kitchen |
| 16 | 40 | 40 | 472 Summerview Crossing | 40 | 40 | Dishwasher |
| 17 | 41 | 41 | 234 Drewry Trail | 41 | 41 | Rooftop garden |
| 18 | 42 | 42 | 424 Surrey Alley | 42 | 42 | Pet Friendly |
| 19 | 45 | 45 | 70033 Duke Drive | 45 | 45 | Dishwasher |
| 20 | 47 | 47 | 09322 Anderson Center | 47 | 47 | Tennis court |
| 21 | 48 | 48 | 98 Columbus Alley | 48 | 48 | Patio |
| 22 | 51 | 51 | 61 Melody Crossing | 51 | 51 | Laundry |
| 23 | 52 | 52 | 649 Shopko Plaza | 52 | 52 | Swimming pool |
| 24 | 55 | 55 | 2074 Magdeline Parkway | 55 | 55 | Wood flooring |
| 25 | 56 | 56 | 85 Roxbury Court | 56 | 56 | Fitness center |
| 26 | 58 | 58 | 41055 Nancy Circle | 58 | 58 | Wood flooring |
| 27 | 62 | 62 | 85 Hermina Circle | 62 | 62 | Fitness center |
| 28 | 65 | 65 | 0579 Burrows Terrace | 65 | 65 | Rooftop garden |
| 29 | 68 | 68 | 11 Bunker Hill Point | 68 | 68 | Laundry |
| 30 | 69 | 69 | 01 Rutledge Pass | 69 | 69 | air conditioning |

In [88]:
```python
from sqlalchemy import create_engine, MetaData, Table

db_user = 'root'
db_password = 'root'
db_host = 'localhost'
db_name = 'housing_system'

db_url = f'mysql+pymysql://{db_user}:{db_password}@{db_host}/{db_name}'

engine = create_engine(db_url)

metadata = MetaData()
metadata.reflect(bind=engine)

with engine.connect() as conn:
    for table_name in metadata.tables.keys():
        table = metadata.tables[table_name]
        print(f"\nTable: {table_name}")

        result = conn.execute(table.select().limit(5))

        for row in result:
            print(row)
```

```
Table: agent
(1, 1, '158-785-9731', 'Home Valuation')
(3, 3, '770-420-7624', 'Negotiation Assistance')
(4, 4, '599-434-6820', 'Home Valuation')
(6, 6, '819-292-6541', 'Relocation Services')
(7, 7, '188-472-7525', 'Property Tours')

Table: lease_agreement
(1, 1, 'Deposits and fees', '3.6', '4')
(3, 3, 'Repairs and maintenance', '3.2', '3')
(4, 4, 'Limits on occupancy', '3.7', '9')
(6, 6, 'Deposits and fees', '6.4', '5')
(7, 7, 'Term of the tenancy', '2.3', '6')

Table: property
(1, 1, '640 Arizona Circle', 1, 1, 'Dishwasher')
(3, 3, '65336 Evergreen Parkway', 3, 3, 'Patio')
(4, 4, '5461 Nancy Trail', 4, 4, 'Tennis court')
(6, 6, '34 Arrowood Point', 6, 6, 'Dishwasher')
(7, 7, '95 Pierstorff Avenue', 7, 7, 'Swimming pool')

Table: owner
(1, '297-911-6070')
(3, '863-214-1500')
(4, '989-109-0001')
(6, '110-786-9847')
(7, '476-346-8504')

Table: contract
(1, 1, 'Property Access', 'consideration')
(3, 3, 'Pets Policy', 'offer')
(4, 4, 'Lease Duration', 'authority and capacity')
(6, 6, 'Property Access', 'and certainty')
(7, 7, 'Pets Policy', 'authority and capacity')

Table: location
(2, 'Huntington', 'West Virginia', '58118-0353')
(4, 'Tucson', 'Arizona', '68462-339')
(5, 'Memphis', 'Tennessee', '49483-390')
(7, 'San Jose', 'California', '0025-1861')
(8, 'El Paso', 'Texas', '67510-0505')

Table: maintenance_request
(1, 1, 'Plumbing Issue', 'Request for repairs related to plumbing problems
such as leaks clogs or faulty fixtures', 'Completed')
(4, 4, 'HVAC System', 'Request for heating ventilation and air conditionin
g (HVAC) system maintenance or repairs', 'Closed')
(6, 6, 'Pest Control', 'Request for pest control services to address issue
s with insects rodents or other pests', 'Completed')
(7, 7, 'Landscaping/Gardening', 'Maintenance request for outdoor areas',
'On Hold')
(8, 8, 'Security System', 'gardens', 'Closed')

Table: payment
(1, 1, '$1947.50', 'Check')
(3, 3, '$557.88', 'Wire Transfer')
(4, 4, '$4088.82', 'Credit Card')
(6, 6, '$6599.15', 'Bank Transfer')
(7, 7, '$7152.98', 'Credit Card')
```

Table: property_image
(1, 'data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAABAAAAAQCAYAAAAf8/9hAAA
ABGdBTUEAAK/INwWK6QAAABl0RVh0U29mdHdhcmUAQWRvYmUgSW1hZ2VSZWFkeXHJZTwAAAHiS
URBVDj ... (516 characters truncated) ... Fll50n8XLXOJYI1ez09QA9C4s3w6J7M8
a9r/BoHcd1ycypMtrrFH97jTO2XoQEIbgE3g22ZfhD3fQyY0jhZOXgqcxJQyzlanSmPWg02tLi
v0ElW7bVD/N/wGu4yJFlYuLaQAAAABJRU5ErkJggg==', 1, 'Modern Downtown Apartmen
t : Contemporary 2-bedroom apartment with sleek design and city views. Ame
nities include a rooftop pool and fitness center')
(3, 'data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAABAAAAAQCAYAAAAf8/9hAAA
ABGdBTUEAAK/INwWK6QAAABl0RVh0U29mdHdhcmUAQWRvYmUgSW1hZ2VSZWFkeXHJZTwAAAHnS
URBVDj ... (520 characters truncated) ... MSG0/RoBz1QeDwTiVSkEmk4l4QJ3JvGQ
yCd1ud4wE9dg7oGi32+eopOY4TjGXy6k9rWY6nUKn0xnjbV00m82rnQQUjUbDQZIqdinTzZC5W
DRD9BH1Vqt1Y+b/BXpYxDgsNaz2AAAAAElFTkSuQmCC', 3, 'Beachfront Condo : Beach
side 2-bedroom condo with direct ocean views. Enjoy the sound of waves fro
m your private balcony. Resort-style amenities included')
(4, 'data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAABAAAAAQCAYAAAAf8/9hAAA
ABGdBTUEAAK/INwWK6QAAABl0RVh0U29mdHdhcmUAQWRvYmUgSW1hZ2VSZWFkeXHJZTwAAAJMS
URBVDj ... (656 characters truncated) ... vpE7TEWSrO0kbQL49RLRL8j1i37N7XQB
tb5bkBJQLPEpz9A3mAmtiGNWlD5h92YfnVnFgXQBtLxfrbiCjzr2EViK0EnlxrZ6Er+wi1ER4y
07Cd+4gocvbR38Bt2OvTVFKHBsAAAAASUVORK5CYII=', 4, 'Urban Loft with Industri
al Flair : Loft-style apartment with exposed brick walls and industrial ac
cents. Open floor plan and proximity to trendy shops and cafes')
(6, 'data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAABAAAAAQCAQAAAC1+jfqAAA
ABGdBTUEAAK/INwWK6QAAABl0RVh0U29mdHdhcmUAQWRvYmUgSW1hZ2VSZWFkeXHJZTwAAACuS
URBVCj ... (104 characters truncated) ... 1pNa228CSLskM6DMofPwbZFkzqM0yb6A
DjeaJmEE+OgnSrBgEEl3Z0JsHQv73Km65GhnNHb6AlmUNgrnBFSBZ1MCbK2wBYmlq4CbLelYGB
BJDw2c+DUdevZ8ffsX6A70Y4hwAAAAASUVORK5CYII=', 6, 'Rustic Mountain Cabin: S
ecluded 1-bedroom cabin nestled in the mountains. Rustic charm with a fire
place and hiking trails right outside your door')
(7, 'data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAABAAAAAQCAYAAAAf8/9hAAA
ABGdBTUEAAK/INwWK6QAAABl0RVh0U29mdHdhcmUAQWRvYmUgSW1hZ2VSZWFkeXHJZTwAAAJ8S
URBVDj ... (720 characters truncated) ... 6zhOQMqPgeTuSr2RMRqvQm31XY7Fy6Hm
0tEV1zM6/MRAI9BPQvTMtSe9RXxeUjRnMhdbxbM6Br5qQDAaDLX/mM7v9ztHhrtt7a51D22u5f
Dq9ev38WHqyUt5PJr6PrWVr/2QAAAAASUVORK5CYII=', 7, 'Urban Loft with Industri
al Flair : Loft-style apartment with exposed brick walls and industrial ac
cents. Open floor plan and proximity to trendy shops and cafes')

Table: review
(1, 1, 0, 'Worst')
(3, 3, 0, 'Loved it')
(4, 4, 1, 'Loved it')
(6, 6, 0, 'Need Improvement')
(7, 7, 2, 'Bad')

Table: tenant
(1, 1, '911-137-6445', 'The length of time at the property')
(3, 3, '474-173-9673', 'The reason for moving')
(4, 4, '466-202-4428', 'The address of the previous rental')
(6, 6, '398-405-3194', 'The address of the previous rental')
(7, 7, '837-581-6523', 'The reason for moving')

Table: user
(3, 'Darsie', '560-898-5044', 'dpurvey1o')
(5, 'Mason', '325-732-4155', 'mfeld4')
(6, 'Tremayne', '889-494-5569', 'tashfulls')
(7, 'Meredithe', '971-889-2976', 'mboysonx')
(8, 'Catina', '961-779-4761', 'cternouthm')

In [118]:
```python
from sqlalchemy import create_engine, select, text
import pandas as pd

username = "root"
password = "root"
database = "housing_system"

engine = create_engine(f"mysql+pymysql://{username}:{password}@localhost/{d

conn = engine.connect()

stmt = select("*").select_from(text("payment"))

df1 = pd.read_sql_query(stmt, conn)

print("Query Result:")
print(df1)
```

```
Query Result:
    payment_id  lease_agreement_id    amount  payment_method
0            1                   1  $1947.50          Check
1            3                   3   $557.88  Wire Transfer
2            4                   4  $4088.82    Credit Card
3            6                   6  $6599.15  Bank Transfer
4            7                   7  $7152.98    Credit Card
5            8                   8  $4507.16  Online Payment
6           13                  13  $7392.64  Online Payment
7           14                  14  $6965.06    Credit Card
8           19                  19  $1347.89           Cash
9           20                  20  $1372.16     Debit Card
10          22                  22  $8875.05  Online Payment
11          24                  24  $3390.11  Online Payment
12          28                  28  $6128.16          Check
13          30                  30  $7755.46     Debit Card
14          35                  35  $2030.17  Wire Transfer
15          39                  39  $2824.52           Cash
16          40                  40  $2397.32  Wire Transfer
17          41                  41  $2119.15  Wire Transfer
18          42                  42  $1327.13          Check
19          45                  45  $1803.25          Check
20          47                  47  $4209.50  Bank Transfer
21          48                  48  $2269.82           Cash
22          51                  51  $7958.66    Credit Card
23          52                  52  $1347.11     Debit Card
24          55                  55  $9604.61           Cash
25          56                  56  $3979.65          Check
26          58                  58  $7535.35          Check
27          62                  62  $8409.08  Wire Transfer
28          65                  65  $6151.09           Cash
29          68                  68  $4827.55           Cash
30          69                  69  $3314.84    Credit Card
```

In [120]:
```python
from sqlalchemy import create_engine, select, text
import pandas as pd

username = "root"
password = "root"
database = "housing_system"

engine = create_engine(f"mysql+pymysql://{username}:{password}@localhost/{d

conn = engine.connect()

stmt = select(text("o.owner_id, o.contact_number, p.address, p.size, p.room
    .select_from(text("owner o JOIN property p ON o.owner_id = p.owner_id")


df2 = pd.read_sql_query(stmt, conn)
print("Query Result:")
print(df2)

conn.close()
```

```
Query Result:
    owner_id contact_number              address  size  rooms
0          1   297-911-6070     640 Arizona Circle     1      1
1          3   863-214-1500  65336 Evergreen Parkway    3      3
2          4   989-109-0001       5461 Nancy Trail     4      4
3          6   110-786-9847      34 Arrowood Point     6      6
4          7   476-346-8504     95 Pierstorff Avenue    7      7
5          8   576-606-1377        7 Westend Street     8      8
6         13   387-800-8510   8045 Magdeline Crossing   13     13
7         14   638-295-0072    3737 Riverside Terrace   14     14
8         19   285-206-3519    02 Morningstar Circle   19     19
9         20   948-895-0758         523 Maple Pass     20     20
10        22   348-638-1728         6 Walton Drive     22     22
11        24   452-494-0023    69674 Saint Paul Lane   24     24
12        28   445-696-5247      25 Coolidge Center    28     28
13        30   888-623-0482       5220 Oak Crossing    30     30
14        35   911-436-0807   0263 Mockingbird Plaza   35     35
15        39   789-987-7632      99554 Bunting Road    39     39
16        40   386-316-6314  472 Summerview Crossing   40     40
17        41   391-311-8730       234 Drewry Trail    41     41
18        42   152-294-1903        424 Surrey Alley    42     42
19        45   928-194-1283        70033 Duke Drive    45     45
20        47   328-747-7485    09322 Anderson Center   47     47
21        48   494-514-2252       98 Columbus Alley    48     48
22        51   795-800-2452      61 Melody Crossing    51     51
23        52   480-363-7045        649 Shopko Plaza    52     52
24        55   404-933-5503   2074 Magdeline Parkway   55     55
25        56   555-134-0337       85 Roxbury Court     56     56
26        58   227-705-4972      41055 Nancy Circle    58     58
27        62   641-619-6860       85 Hermina Circle    62     62
28        65   849-812-1000     0579 Burrows Terrace   65     65
29        68   210-244-4231    11 Bunker Hill Point    68     68
30        69   520-170-4433       01 Rutledge Pass     69     69
```