Prospective Developers Worksheet

Given the following two tables, answer questions 1-5:

Names

Name_id	First_name	Last_name
1	John	Smith
2	Jane	Smith
3	Jose	Mendez
4	Rachael	Callaway

Properties

Property_id	House_number	Street_name	City	State
1	123	Sunshine St	Malibu	CA
2	815	Easy St	Mecklenburg	TN
3	630	4th Ave	El Paso	TX
4	847	Riker Circle	San Francisco	CA

1. Write Create Table statements specifying appropriate column data types. Assume these data tables will store all the names and addresses in a large city.

```
CREATE TABLE Names(
    Name_id int, ← maybe make primary key
    First_name varchar(255),
    Last_name varchar(255)
);
CREATE TABLE Properties(
    Property_id int,
    House_number int,
    Street_name varchar(255),
    City        varchar(255),
    State       varchar(2)
);
```

2. Using the following output, fill in the Create Table statement for a bridge table called PROPERTY_OWNERS and show its data:

Owner Name	Address
Rachael Callaway	630 4th Ave, El Paso TX
Rachael Callaway	847 Riker Circle, San Francisco CA
Jose Mendez	815 Easy St, Mecklenburg TN
John Smith	123 Sunshine St, Malibu CA
Jane Smith	123 Sunshine St, Malibu CA

First and Lastname contained in name_id

CREATE TABLE PROPERTY_OWNERS

(

~~Owner name varchar(255)~~ name_id INT REFERENCES Names(name_id

~~Address varchar(255)~~ property_id INT REFERENCES properties(property_id

);

belongs to

name_id property_id

[ColumnName?]	[ColumnName?]
4	3
4	4
3	2
1	1
2	1

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y = property_owners   n = names   p = properties

3. Using information from questions 1 and 2, write a View that produces the following output:

Owner Name	Address
Rachael Callaway	630 4th Ave, El Paso TX
Rachael Callaway	847 Riker Circle, San Francisco CA
Jose Mendez	815 Easy St, Mecklenburg TN
John Smith	123 Sunshine St, Malibu CA
Jane Smith	123 Sunshine St, Malibu CA

```
CREATE VIEW Property_Ownership AS
                                                      "Owner Name"
SELECT
   CONCAT(n.First_name,' ',n.Last_name)AS ~~"Owner"~~ ,
   CONCAT(p.House_number,' ', p.street_name,', ' p.City,p.State))
                                                      AS 'Address'
From
   Names n
Join
   PROPERTY_OWNERS y ON n.name_id = y.name_id
JOIN
   properties p ON y.property_id = p.property_id
ORDER BY
      n.last_name;
```

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Just count
same property
apperances

4. Using information from questions 1 and 2, write a View that produces the following output:

Address	Owner	Owner Count
123 Sunshine St, Malibu CA	John Smith	2
630 4th Ave, El Paso TX	Rachael Callaway	1
815 Easy St, Mecklenburg TN	Jose Mendez	1
847 Riker Circle, San Francisco CA	Rachael Callaway	1

```
CREATE VIEW Owner_Count AS
SELECT
    CONCAT(p.House_number,' ', p.street_name,', 'p.City,', '
        p.state AS "Address",
    CONCAT(n.First_name,' ',n.last_name) AS "owner",
  (SELECT COUNT(*)
    FROM PROPERTY_OWNERS y2
    WHERE y2.property_id = p.property_id) AS "OwnerCount"
  From
    properties p
 JOIN
   PROPERTY_OWNERS y ON ~~properties~~ p.property_id = y.property_id
 JOIN
     Names n on y.name_id = n.name_id
 ORDER BY
        p.House_number, ;
                  p.street_name (if super important)
```

5. With one of the following languages, (C#, Python, Java, or Visual Basic), write a function that parses the following text string and creates SQL insert statement text that can be used to fill the tables in question 1: C#

Rachael|Callaway|847|Riker Circle|San Francisco|CA

Goina assume a property object and Owner object are alreody mode,

```
public class SQLQue
{
  public static string makeinsertstatements(string text
  {
    string[] attributes = text.split('|');
      string Fn = | [0];
      string Ln = | [1];
                    [2];
      string Sn =   [3];
      string strn =
                  = [4];
      string city =
      string State = [5];

    string namesInsert = @"INSERT INTO Names....
    string propertiesInsert = @" ....
    return namesInsert + "\n" + propertiesInsert;
                         (Finish at home
  }
~~public static void main()~~
{
```

6. What is wrong with the logic in the following PowerBuilder PowerScript *function*:

```
public function boolean uf_check_errors ✓
();//--------------------------------------------------------------------------------------- ✓

    long      ll_row, ll_rows ✓

    ll_rows = dw_maintenance.rowcount() ✓
    if ll_rows < 1 then return false ✓
    for ll_row = 1 to ll_rows ✓

            if f_isnull(trim(dw_maintenance.getitemstring(ll_row, 'application_number')),'') = '' then
                    MessageBox("Empty Application Number Found","Please enter a valid number.", information!, ok!)
                    return true
            else
                    return false
            end if
    next
end function
```

→ This shouldn't be in The for loop and I Think else Just shouldn't be There