

## Lesson 4 Homework

1. What is the difference between "Merge" and "Append" in Power Query?

The difference is that Merge is like JOINS in SQL and adds related details from other datasets, while append is like UNION ALL in SQL and combines rows with the same structure.

2. How do you split a "Full Name" column into "First Name" and "Last Name"?

There are a few ways to do this. But, I would go for extracting with the delimiter. In the Power Query, from add column ribbon, there is extracting with the delimiter, I would choose extract after delimiter option to split FirstName and LastName with whitespace.

3. What is "Pivot Columns" used for?

Pivoting is used for turning row values into columns sometimes with aggregations, It also summarizes or reshapes data by a category.

4. How do you undo a step in Power Query?

There is applied steps tab in Power Query, from there I can undo some steps.

5. What is the purpose of "Reference" vs. "Duplicate" in queries?

Duplicate duplicates with changes, after duplication the new query does not depend of the original. While reference creates a linked query that refers to the output of the original query. Whenever we make changes to the original it will be done in the referenced query as well.

6. Merge Orders.csv and Customers.xlsx on CustID (inner join).

I did on PowerBI, .pbix format

7. Pivot the Product column to show total Quantity per product.

I did on PowerBI, .pbix format

8. Append two tables with identical columns (e.g., Orders\_Jan.csv + Orders\_Feb.csv).

I used duplicate version of orders as orders\_dupl and customers to append. Because, Orders\_Jan.csv + Orders\_Feb.csv these files were not provided.

9. Use "Fill Down" to replace nulls in the Email column with the previous value.

I used Fill Up, as there wasn't any previous to fill down.

10.Extract the domain (e.g., "example.com") from the Email column.

I did it on PowerBI

11. Write M-code to merge queries dynamically based on a parameter (e.g., JoinType = "Inner").

let

```
// Use the JoinType parameter (text value)
```

```
JoinType = JoinType,
```

```
// Map the text options to Power Query's JoinKind values
```

```
JoinKindMap = [
```

```
    Inner = JoinKind.Inner,
```

```
    LeftOuter = JoinKind.LeftOuter,
```

```
    RightOuter = JoinKind.RightOuter,
```

```
    FullOuter = JoinKind.FullOuter
```

```
],
```

```
// Pick the correct JoinKind based on parameter value
```

```
SelectedJoinKind = Record.Field(JoinKindMap, JoinType),
```

```
// Load your source tables
```

```
CustomersTable = Customers,
```

```
OrdersTable = orders_dupl,
```

```
// Merge dynamically based on SelectedJoinKind
```

```
MergedTables = Table.NestedJoin(
```

```
    CustomersTable, {"CustID"},
```

```
    OrdersTable, {"CustID"},
```

```
    "OrderID",
```

```
    SelectedJoinKind
```

```
),
```

```
// Expand the merged column to show desired fields from Orders
```

```
Expanded = Table.ExpandTableColumn(
```

```
    MergedTables,
```

```
    "OrderID",
```

```
    {"Product", "Quantity"}
```

```
)
```

```
in
```

```
    Expanded
```

11.Unpivot a table with columns like "Jan\_Sales," "Feb\_Sales" into a "Month" and "Sales" format.

I unpivoted Orders table because Jan\_Sales," "Feb\_Sales these files were not provided.