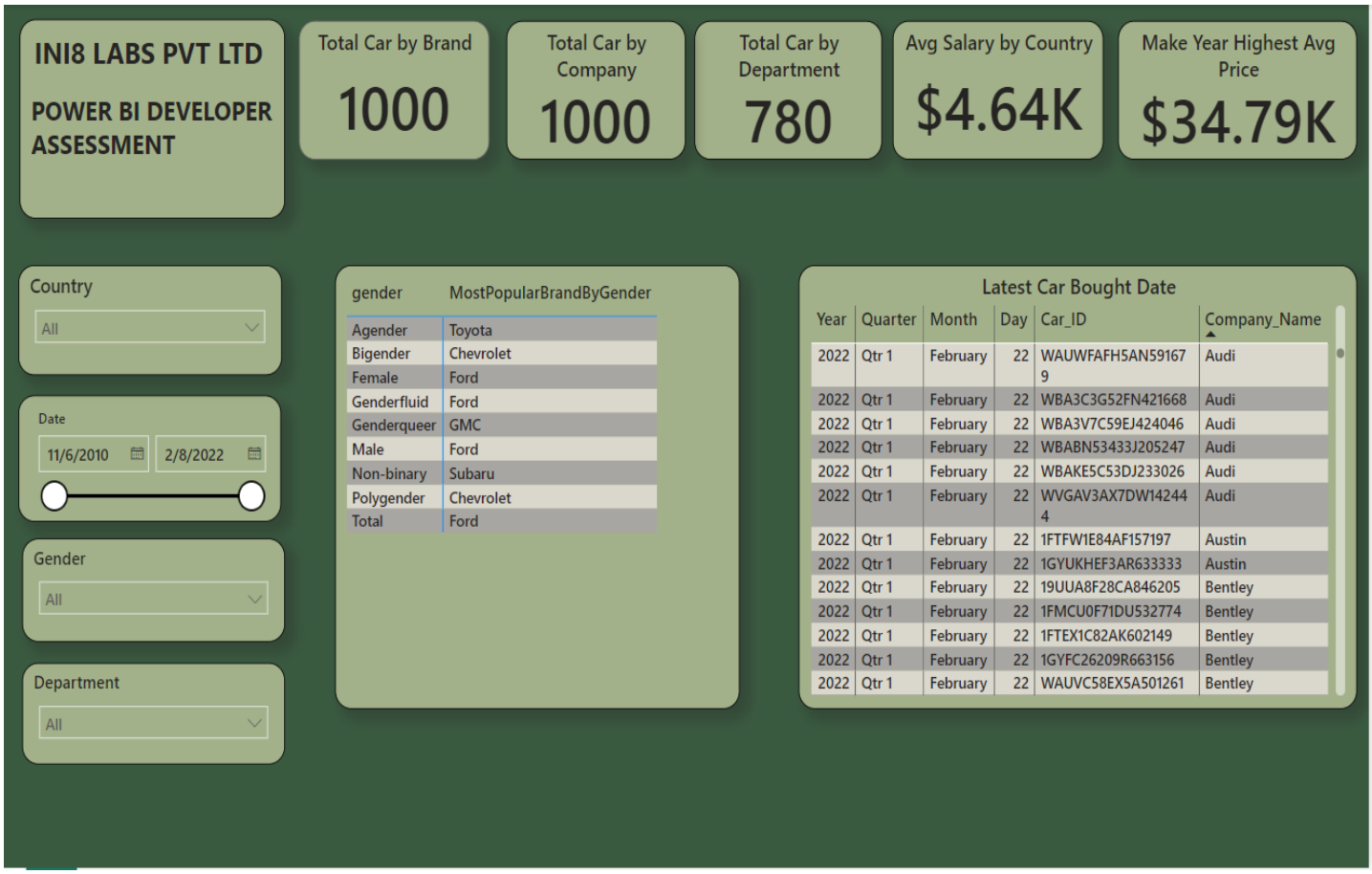
INI8 LABS PVT LTD

Power BI Developer Assessment



Summary

1. Date Table

- **Purpose**: Facilitates time-based analysis, ensuring accurate reporting of car sales over different periods.
- **Implementation**: A dedicated Date Table was created and linked to transaction data to enable dynamic date filtering.

Dax Function for Creating Date Table

```
DateTable =
CALENDAR(
    MIN('Buyer Details'[carboughtdate]),
    MAX('Buyer Details'[carboughtdate]))
```

2. Date Slicer (Slider)

- **Purpose**: Allows users to filter data by a specific date range.
- **Implementation**: A slicer visual with a date slider was added to allow dynamic control over the time frame for car sales.

3. Car Count by Brand/Company/Department

- **Purpose**: Displays the number of cars sold by brand or department.
- **Implementation**: Card Visuals were created for each brand/company/department with measures counting the total sales.

Measures to calculate Car Count by Brand/Department/Company

By Brand = **Car_count_by_Brand = COUNT(Cars[Company_Name])**

By Department = **Car Count by Department = COUNT('Buyers Details'[Department])**

By Company **= Car Count by Company = COUNT(Company[Company_Name])**

4. Latest Car Purchase Date (Calculated Column)

- **Purpose**: Displays the most recent car purchase date for each buyer.
- **Implementation**: A calculated column in the `Cars` table shows the latest car purchase date using a MAX operation:

Measure to Calculate Latest Car Bought Date

= LatestCarBought = CALCULATE (MAX ('Buyer Details'[carboughtdate]),

ALLEXCEPT ('Buyer Details', 'Buyer Details'[Buyer_ID]))

Visuals = I used "Table Visual" to show the latest car bought date.

I used this visualization because tables are great choice to show and compare detailed data and values and it provide specific information through rows and columns.

5. Average Salary by Country

- **Purpose**: Calculate and visualize the average salary of buyers from different countries.
- **Implementation**: A DAX measure "Average" was used to calculate average salary by country:

Measure to Calculate Avg Salary by Country

```
CALCULATE(
   AVERAGE('Buyer Details'[salary]),
   Company[Country] = SELECTEDVALUE(Company[Country]))
```

Visuals = I used "Card" Visualization for this because it is so versatile tool for presenting key values and each can display specific metric.

6. Make Year with the Highest Average Price

- **Purpose**: Identify the car make year with the highest average price.
- **Implementation**: A DAX calculation was used to find the make year with the highest average price:

Measure to Calculate Make Year With Highest Avg Price

MakeYear_HighestAvgPrice = CALCULATE(AVERAGE('Cars'[Price]), ALLEXCEPT('Cars', 'Cars'[Make_Year]))

Visuals = Again I used card visualization for this Measure . It shows avg highest price over the year.

7. Most Popular Car Brand by Gender

- **Purpose**: Identify the most popular car brand for each gender in the dataset.
- **Implementation**: A DAX measure ranks car brands by gender and selects the top brand for each:

```
MostPopularBrandByGender =
    CALCULATE(
        MAXX(
            TOPN(
                1,
                SUMMARIZE(
                    'Buyer Details',
                    'Cars'[Company_Name ],
                    "CarCount", COUNTROWS('Buyer Details')
                ),
                [CarCount],
                DESC
            ),
            'Cars'[Company_Name ]
        ),
        ALLEXCEPT('Buyer Details', 'Buyer Details'[gender]))
```

Visuals = I used table visualization to show which car brand is most popular in each gender.