Power BI - lesson 15

Lesson 15: Movies Analysis Dashboard

Step 1. Data Preparation

1. Load `Movies.xlsx` into Power BI.

2. Handle missing values:

   - For **Budget** and **Box Office**: replace NULL with `0` or median.

   - Ensure numeric fields are in **Decimal** format.

   - Release Date → convert to **Date** format.

Step 2. Create DATE Table

```
DateTable =
ADDCOLUMNS (
  FILTER (
    CALENDARAUTO(),
    [Date] <= TODAY()
  ),
  "Year", YEAR([Date]),
  "Month", FORMAT([Date], "MMMM"),
  "Month Number", MONTH([Date]),
  "Quarter", "Q" & FORMAT(QUARTER([Date]), "0")
)
```

👉 Create a relationship: `Movies[Release Date] → DateTable[Date]` .

Step 3. Calculated Columns

Profit

```
Profit = Movies[Box Office] - Movies[Budget]
```

Run Time Category

```
Run Time Category =
SWITCH(
    TRUE(),
    Movies[Run Time] < 90, "Short",
    Movies[Run Time] <= 120, "Medium",
    "Long"
)
```

Step 4. Measures

Box Office & Budget

```
Total Box Office = SUM(Movies[Box Office])
Average Budget = AVERAGE(Movies[Budget])
```

Margins

```
Average Margin = AVERAGEX(Movies, DIVIDE(Movies[Profit], Movies[Budget], 0))
```

Movies with Oscars

```
Movies with Oscars = COUNTROWS(FILTER(Movies, Movies[Oscar Wins] >
0))
```

Top Genre by Box Office

```
Top Genre =
CALCULATE(
    VALUES(Movies[Genre]),
    TOPN(1, SUMMARIZE(Movies, Movies[Genre], "TotalBox", SUM(Movies[Box
Office])), [TotalBox], DESC)
)
```

Year-over-Year Growth

```
Box Office YoY % =
VAR SalesCY = [Total Box Office]
VAR SalesLY = CALCULATE([Total Box Office], SAMEPERIODLASTYEAR(DateT
able[Date]))
RETURN DIVIDE(SalesCY - SalesLY, SalesLY, 0)
```

Nominations per Director

```
Avg Nominations per Director = AVERAGEX(VALUES(Movies[Director]), AVER
AGE(Movies[Nominations]))
```

Step 5. Visualizations

Page 1: Overview

- **Cards** → Total Box Office, Avg Margin, Movies with Oscars.

- **Bar Chart** → Box Office by Genre (stacked by Certificate).

- **Line Chart** → Trend of Box Office by Year.

- **Slicers** → Country, Release Date (range).

- **KPI** → YoY Box Office Growth.

Page 2: Director Analysis

- **Treemap** → Budget by Director (size = Budget, color = Oscars).

- **Table** → Director, Total Nominations, Oscars, Avg Nominations.

- **Slicer** → Genre.

- **Donut Chart** → Run Time Category distribution.

Page 3: Genre & Country Insights

- **Matrix** → Genre vs Country with Box Office.

- **Pie Chart** → Box Office share by Certificate.

- **Word Cloud (Marketplace Visual)** → Genre keywords.

- **Slicer** → Run Time Category.

- **Conditional formatting** → Matrix with color scale on Box Office.