Load `Movies.xls` into Power BI Desktop

1. Open **Power BI Desktop**
2. Click **Home > Get Data > Excel**
3. Browse and select the `Movies.xls` file
4. In the **Navigator**, select the sheet or table (e.g., `Movies`)
5. Click **Transform Data** (not "Load" yet) to clean the data in Power Query

Remove or Impute Missing Values in `Budget` and `Box Office`

In Power Query Editor:

1. Select the `Budget` column
    - To **replace nulls with 0**:
        - Right-click → **Replace Values** → Replace `null` with `0`
    - Or use **Transform > Statistics > Median** to get the median and manually input
2. Repeat for `Box Office`

Ensure All Columns Are in the Appropriate Format

- `Budget`, `Box Office`: **Decimal Number**
- `Release Date`: **Date**
- `Run Time`: **Whole Number**
- `Genre`, `Director`, `Country`, `Certificate`: **Text**
- `Nominations`, `Oscar Wins`: **Whole Number**

Use the **Data Type** dropdown on the toolbar in Power Query to set them.

Create a Separate `Date` Table Using `Release Date`

Go back to Power BI (after clicking **Close & Apply**).

Create a **New Table** using DAX:

```
DateTable =
ADDCOLUMNS(
    CALENDARAUTO(),
    "Year", YEAR([Date]),
    "Month", FORMAT([Date], "MMMM"),
    "MonthNum", MONTH([Date]),
    "Quarter", "Q" & FORMAT([Date], "Q")
)
```

Create a Calculated Column: `Profit`

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

Calculated Column: Run Time Category

```
RunTimeCategory =
SWITCH(
    TRUE(),
    Movies[Run Time] < 90, "Short",
    Movies[Run Time] >= 90 && Movies[Run Time] < 120, "Medium",
    Movies[Run Time] >= 120, "Long",
    "Unknown"
)
```

Total Box Office

```
Total Box Office = SUM(Movies[Box Office])
```

Average Budget

```
Average Budget = AVERAGE(Movies[Budget])
```

Average Margin (Box Office – Budget)

```
Average Margin =
AVERAGEX(
    Movies,
    Movies[Box Office] - Movies[Budget]
)
```

Total Movies with Oscars

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

Top Genre by Box Office

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

Year-over-Year Box Office Growth

```
YoY Box Office Growth =
VAR CurrentYear =
```

```
    CALCULATE([Total Box Office], DATESYTD(DateTable[Date]))
VAR PrevYear =
    CALCULATE([Total Box Office],
DATESYTD(SAMEPERIODLASTYEAR(DateTable[Date])))
RETURN
DIVIDE(CurrentYear - PrevYear, PrevYear)
```

Format this measure as **percentage** and use in a **KPI visual** with a target of `> 0%`.

Average Nominations per Director

```
Avg Nominations per Director =
AVERAGEX(
    VALUES(Movies[Director]),
    CALCULATE(SUM(Movies[Nominations]))
)
```