**Mini Project 1 Data Processing**

**Project Follow-up**

1. Import DBProduction, DBRightFirstTime, DBMachineUtilization1, DBDowntime csv files into PowerBI
2. Create KPIs by writing DAX expressions using "New measures", using the formulas provided by the Project Assignment.

**Managing Model Relationships**

1. Using "Append Queries" of 3 tables, DBProduction, DBMachineUtilization1, DBDowntime into a new table named 'New\_machineUtilization1' to fix "Blank" errors when creating slicers.
2. Created 3 New tables Merged Date, Merged LineID, Merged TeamID to set the relationship between DBRightFirstTime and New\_MachineUtilization1 to be used as slicers for date, LineID and TeamID.

**Making Conclusions**

1. Create Dashboard with the 6 KPIs including LineID slicer, TeamID slicer and Date slicer.
2. Testing correlations and creating insights

**Writing DAX Measures and Applying Relationships**

1. There are 2 values for scrapFBE & ProductionFBE from 2 different tables. DBRightFirstTime or the DBMachineUtilization1.

* The scrap rate is derived from the DBRightFirstTime database column.

1. New\_MachineUtilization1 is a dataset that was combined from 3 different tables (DBProduction, DBDowntime and DBMachineUtilization1)

* Removed relationship of DBmachineUtilization1 and DBDowntime with DBProduction and replaced with New\_MachineUtilization1.
* This is to fix the issue of "BLANK errors" in slicers because DBproduction and DBmachineUtilization1 relationship have unmatched Rows of IDs.
* The Machine Utilization rate is derived from the New\_machineUtilization1 database column.

1. The Values provided in DBDowntime are assumed to be in seconds

* The 'Downtime in Values by Minutes' is derived from the New\_machineUtilization 1 database column.
* The Downtime Value in our Scorecard is converted into minutes using DAX expression in this formula (sum(New\_MachineUtilization1[Value]) / 60).