BI Practical

Practical 3a: Create the Data staging area for the selected database.

Consider the following type of data in Excel:

Student ID	First Name	Last Name	Age	Gender	Course	SQA	SIC	BI	GIS	CL	Grade
23	Rajeev	More	21	M	BSCIT	88	98	89	95	97	O

Apply the transformations in staging areas:

(a) Remove empty rows or columns

(b) Rename columns

(c) Change data types: (d) Merge columns:

(e) Split columns:

(d) Create calculated columns

(e) Filter data: Remove any data that is not relevant to your analysis, such as filtering out rows for students who have dropped the course.

(f) Group data: Group rows with similar characteristics together to create more meaningful insights, such as grouping students by their majors.

Solution:

What is staging area:

In Power BI, the staging area is a temporary location where data is stored before it is loaded into a data model or a report. It is also known as the "query editor" or "Power Query Editor."

The staging area is where you can perform data transformation, cleansing, and shaping operations on your data before it is loaded into your report or data model. You can use the query editor to perform a wide range of operations such as filtering, sorting,

aggregating, merging, and renaming data. You can also create calculated columns, change data types, and format your data.

The staging area provides a visual interface for working with your data, allowing you to preview the changes you make to your data in real-time. Once you are satisfied with the transformations you have applied, you can load the data into your report or data model.

Steps:

(a) Remove empty rows or columns: In the "Query Editor" window, remove any empty rows or columns by right-clicking on them and selecting "Remove".

(b) Rename columns: In the "Query Editor" window, select a column header and right-click on it. Select "Rename" and enter a new name for the column.

(c) Change data types: In the "Query Editor" window, select a column header and right-click on it. Select "Change Type" and choose the appropriate data type for the column.

(d) Merge columns: In the "Query Editor" window, select the columns that you want to merge. Right-click on the column headers and select "Merge Columns". Choose a separator character and enter a name for the new column that will contain the merged data.

(e) Split columns: In the "Query Editor" window, select the column that you want to split.

Right-click on the column header and select "Split Column". Choose a separator character and enter names for the new columns that will contain the split data.

(d) Create calculated columns: In the "Query Editor" window, click on the "Add Column" tab and select "Custom Column". Enter a formula for the calculated column and choose a name for the new column.

(e) Filter data: In the "Query Editor" window, click on the "Filter Rows" tab and select "Remove Rows". Choose the criteria that you want to use for filtering the data, such as removing rows for students who have dropped the course.

(f) Group data: In the "Query Editor" window, select the columns that you want to group by.

Click on the "Group By" tab and choose the aggregation functions that you want to apply to the grouped data, such as summing the grades for each course.