|  |  |  |  |
| --- | --- | --- | --- |
| A picture containing drawing, stop, room  Description automatically generated | Business Intelligence  Practical #2 | | |
|  |  |  |  |
| **Name** | Amaan Kondkari | **Roll Number** | 21302A0055 |
| **Class** | TY | **Division** | B |
| **Subject/Course** | Business intelligence | | |
| **Topic** | Perform Data Wrangling (ETL) | | |
|  |  |  |  |
| **What is ETL?** | | | |
| 1. ETL stands for Extract, Transform, Load and it is a process used in data warehousing to extract data from various sources, transform it into a format suitable for loading into a data warehouse, and then load it into the warehouse. The process of ETL can be broken down into the following three stages: 2. **Extract**: The first stage in the ETL process is to extract data from various sources such as transactional systems, spreadsheets, and flat files. This step involves reading data from the source systems and storing it in a staging area. 3. **Transform**: In this stage, the extracted data is transformed into a format that is suitable for loading into the data warehouse. This may involve cleaning and validating the data, converting data types, combining data from multiple sources, and creating new data fields. 4. **Load**: After the data is transformed, it is loaded into the data warehouse. This step involves creating the physical data structures and loading the data into the warehouse. 5. The ETL process is an iterative process that is repeated as new data is added to the warehouse. The process is important because it ensures that the data in the data warehouse is accurate, complete, and up-to-date. It also helps to ensure that the data is in the format required for data mining and reporting. | | | |
|  | | | |
| **What is Power Query?** | | | |
| Power Query is a data transformation and data preparation engine. Power Query comes with a graphical interface for getting data from sources and a Power Query Editor for applying transformations. Because the engine is available in many products and services, the destination where the data will be stored depends on where Power Query was used. Using Power Query, you can perform the extract, transform, and load (ETL) processing of data. | | | |
|  | | | |
| **What are the components of Power Query Editor?** | | | |
| Microsoft Power BI, a formidable business intelligence tool, effortlessly converts diverse data sources into interactive reports and dashboards. Offering swift data connections, versatile visualization, and secure sharing on websites, Power BI is a Gartner-recognized leader in analytics and business intelligence. It empowers organizations with data-driven insights, merging analytics, visualization, and best practices for informed decision-making.  Here are a few of the major components of Power BI, as mentioned below:  Power Query  Power View  Power Map  Power BI Desktop  Power Q&A  Power BI Website  Power BI Mobile Apps | | | |
| **Write the steps to perform ETL in Power BI?** | | | |
| Remove other columns to only display columns of interest?    Change the data type of unit in stock column?    Expand the order details table:    Calculate the line total for each order\_Details row:      Rename and reorder columns in the query: | | | |