Experiment No. 7

Aim: Develop a dashboard and reporting tool based on real time social media data.

Theory:

Power BI:

Microsoft created the business intelligence and data visualisation application known as Power BI. In order to generate interactive dashboards, reports, and visualisations, users can connect to a variety of data sources, alter the data, and do other things with it. Users of different skill levels, from business analysts to data scientists, can use the platform. With its user-friendly interface, users can design custom visualisations, add calculated fields, and drag and drop data without having to have a deep understanding of programming. Excel files, cloud-based data sources, and on-premises data sources are just a few of the data sources that Power BI can connect to. After data is connected, users can use Power Query, a data transformation tool included with Power BI, to convert and clean the data.

After data has been processed, users can construct data models using Power Pivot, a tool for building hierarchies and relationships between tables in data modelling. Charts, tables, maps, and gauges are a few examples of interactive visualisations that may be made using data models. Drill-down, drill-through, and filtering are just a few of the data exploration options that Power BI has to offer. Using the Q&A function, which enables users to write in a query and receive an answer in the form of a visualisation, users can also ask questions in natural language. Power BI interfaces with third-party software as well as other Microsoft programmes like Excel and SharePoint. Users can collaborate on reports and dashboards with others and connect to data with ease thanks to this. Moreover, Power BI provides users with access to the Power BI Service, a cloud-based service that enables users to publish, share, and collaborate on reports and dashboards with others. Reports and dashboards may be disseminated both internally inside a company and externally with business associates or clients.

Users can create interactive dashboards and reports using the robust dashboard and reporting tool known as Power BI. A dashboard gives a fast overview of the state of an organisation or business process through the visual presentation of key performance indicators (KPIs) and metrics. In contrast, a report is a thorough examination of data that offers insights into trends, patterns, and anomalies. Users of Power BI may simply connect to data sources, alter and shape data, and produce visuals while building dashboards and reports using a drag-and-drop interface. Dashboards and reports can be altered to suit the requirements of specific users or departments, and they can be distributed both internally inside the company and outside

topartners and clients. Power BI dashboards are built up of visualisations that show KPIs and measurements, such as charts, tables, and gauges.

Users have the option of importing custom visuals from the Power BI marketplace or creating custom visualisations using the built-in visualisations. Moreover, dashboards can have filters and slicers that let users engage with the data and dive down into certain interest areas. Power BI reports offer a deeper study of the data and are more extensive than dashboards. Tables, charts, and maps are just a few of the visuals that may be used to produce reports; they can also incorporate computed variables and metrics. Users can import pre-made visuals or develop their own from scratch. Drill-down, drill-through, and filtering are just a few of the data exploration options that Power BI has to offer. Using the Q&A function, which enables users to write in a query and receive an answer in the form of a visualisation, users can also ask questions in natural language.

Images:
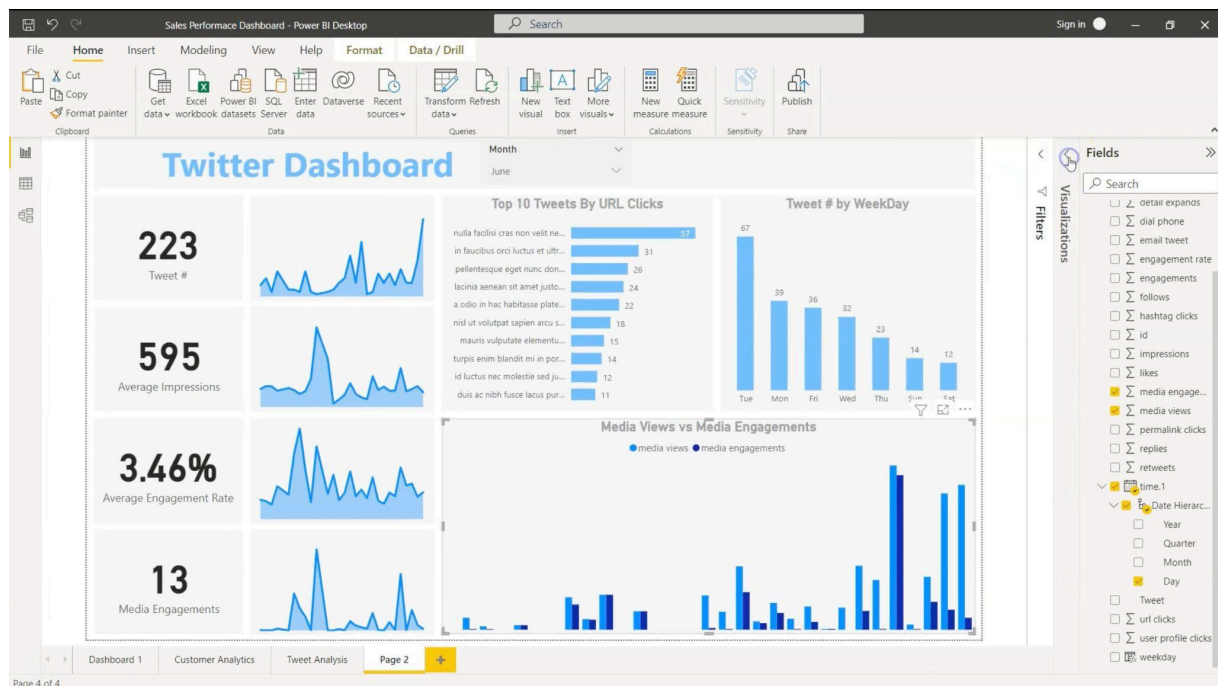
Conclusion -

In summary, a real-time social media dashboard and reporting tool offer invaluable insights for businesses. With comprehensive visualizations and concise reports, decision-makers can stay ahead of trends, optimize marketing strategies, and foster stronger connections with their audience. This approach enables swift adjustments, enhancing competitiveness and driving growth in the dynamic social media landscape.