WEBSITE TRAFFIC ANALYSIS PROJECT
PHASE-2
INNOVATION PHASE

STEP 1:

ANALYSIS OBJECTIVES :

- **The primary objectives of this analysis are:**
  - ✔ Identifying popular pages on the website.
  - ✔ Analyzing traffic trends over time.
  - ✔ Understanding user engagement metrics, such as unique visits, first-time visits, and returning visits.
  - ✔ Exploring potential patterns or anomalies in the data

STEP 2:

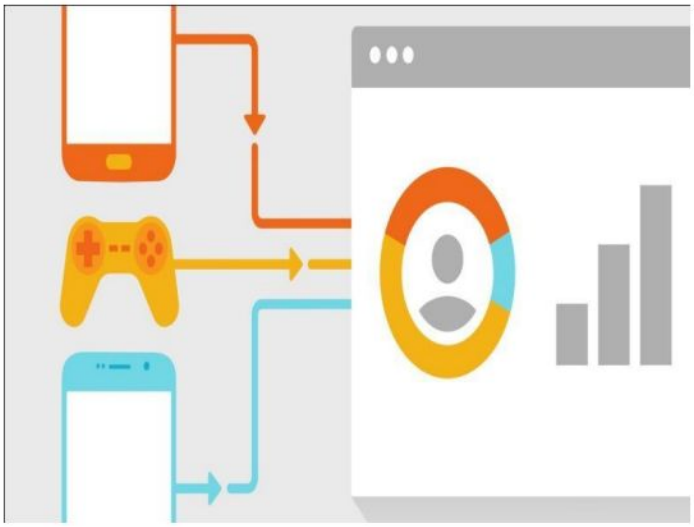
DATA COLLECTION:

- ✔ The data has been collected from the users.
- ✔ Data includes key metrics such as page loads, unique visits, first-time visits, returning visits, and corresponding dates and days of the week.
- ✔ Set up mechanisms to collect relevant data from the website. This may involve implementing tracking codes, integrating with analytics tools like Google Analytics, and collecting user interaction data.
- ✔ It's important to ensure data accuracy and consistency, especially when dealing with metrics collected from web analytics tools.

STEP 3:

VISUALIZATION:

- ✔ Create interactive and informative data visualizations in Cognos, such as charts, graphs, and heatmaps, to make the analysis results more accessible and understandable.
- ✔ Visualizations will include line charts to display trends over time, bar charts to compare metrics across days of the week, and pie charts to illustrate the distribution of visit types (first-time vs. returning).
- ✔ Dashboards will provide an at-a-glance view of key metrics and trends for website owners and stakeholders.
- ✔ Dashboards and reports should be regularly updated to reflect the latest data and insights. Set up automated data refresh schedules if applicable.



STEP 4:

PYTHON INTEGRATION:

- ✔ Python can be integrated into the analysis for more advanced tasks, such as time series forecasting to predict future traffic trends or user behaviour patterns.
- ✔ Machine learning models can be trained using historical data to provide insights into user behaviour, such as predicting which pages are likely to be popular in the future.
- ✔ Advanced statistical analysis can be conducted to identify correlations and dependencies within the data.

STEP 5:

KEY INSIGHTS (SAMPLE):

- **Popular Pages:**
  - ✔ Using page load data, we can identify which pages received the most traffic during the analyzed period.
- **Traffic Trends:**
  - ✔ Trends over time can reveal seasonal patterns or anomalies that may require further investigation.
- **User Engagement:**
  - ✔ Analyzing unique visits, first-time visits, and returning visits can provide insights into user loyalty and engagement.
- **Day-of-Week Analysis:**

- ✔ Comparing metrics across different days of the week can help schedule content or marketing activities effectively.

- **Conversion Rate:**
  - ✔ Calculating conversion rates based on unique visits and page loads can indicate how effectively the website converts visitors.

STEP 6:

RECOMMENDATIONS:

- ✔ Based on insights from this analysis, recommendations can be made to improve the website's performance, content strategy, and user experience.
- ✔ Consider leveraging machine learning models to optimize content recommendations or personalize user experiences.
- ✔ Continuously monitor and analyze website traffic to adapt to changing user behaviors and preferences.

CONCLUSION:

- **Output:**
  - ✔ This analysis aims to provide website owners with valuable insights into their website's performance and user behavior. The combination of data visualization through IBM Cognos and advanced analysis with Python can yield actionable recommendations for enhancing the website's effectiveness and user experience.
  - ✔ Please note that the above report provides a high-level overview, and the actual analysis and insights would require more detailed examination of the data, as well as customization based on specific business goals and objectives.