Solution Architecture

Date	03 November 2023
Team Id	NM2023TMID02276
Project Name	Add google analytics to a Website

Components:

1. Website Visitors:

End-users who visit the website and interact with its content.

2. Website Owners/Administrators:

Individuals responsible for managing and maintaining the website.

3. Google Analytics System:

The Google Analytics platform responsible for collecting and analyzing user data.

Behavior:

1. User Interaction with Website:

Visitors interact with the website by viewing pages, clicking links, submitting forms, etc.

2. Google Analytics Tracking:

The tracking code embedded in the website records user interactions and sends data to the Google Analytics servers.

3. Data Processing and Analysis:

Google Analytics processes the received data to generate reports and insights about user behavior.

Solution Components:

1. Website Front-End:

User interface of the website where visitors interact.

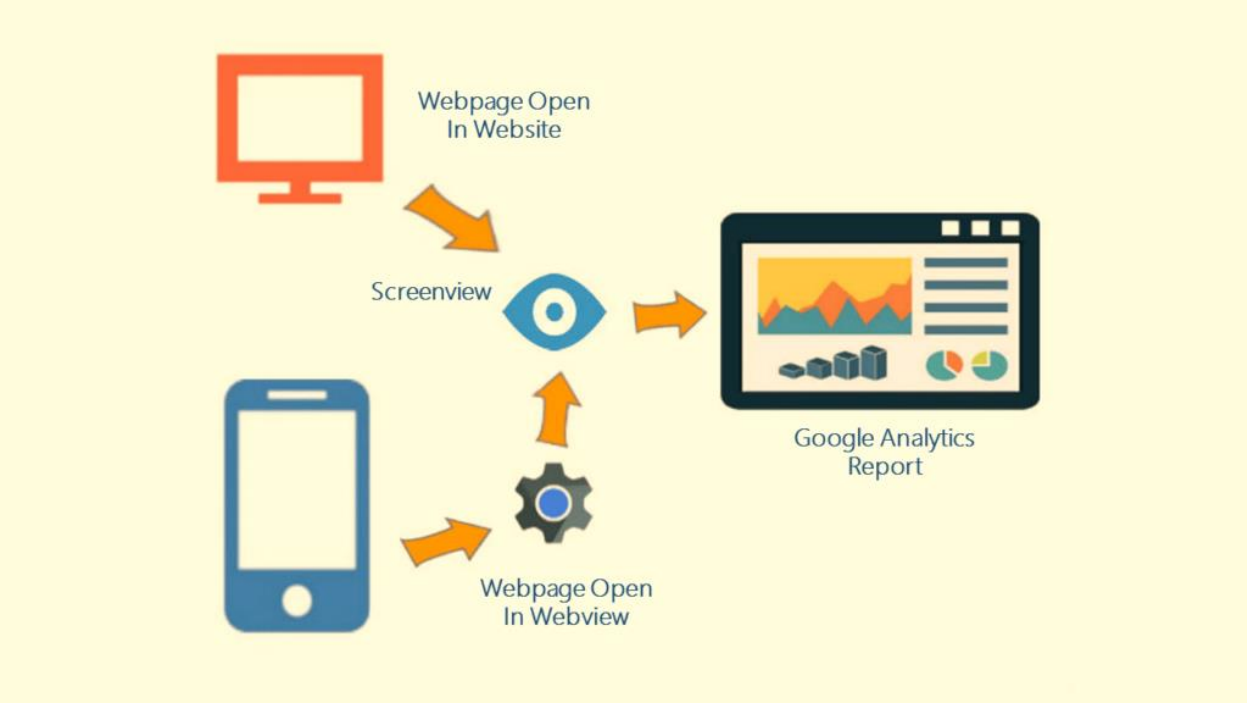
2. Google Analytics Tracking Code:

JavaScript code snippet provided by Google Analytics, embedded in website pages.

3. Google Analytics Servers:

Backend infrastructure managed by Google for processing and storing tracking data.

Solution Architecture Diagram:



Integration Points:

Embedding Tracking Code:

The tracking code is integrated into the website's HTML to capture user interactions.

Data Flow:

1. Website Visitors interact with the Front-End of the website.

2. The Google Analytics Tracking Code sends user interaction data to Google Analytics Servers.

3. Google Analytics processes and analyzes the data.

4. Website Owners/Administrators access analytics reports through the Google Analytics dashboard.

Security Measures:

Data Encryption:

HTTPS ensures secure communication between the website and Google Analytics servers.

Access Control:

Website owners authenticate themselves with their Google account to access analytics data.

Scalability and Performance:

Google Analytics is designed to handle high volumes of data and provide real-time reporting.

Failover and Redundancy:

Google Analytics infrastructure is highly redundant to ensure continuous service availability.

Compliance and Privacy:

Google Analytics complies with data privacy regulations and provides tools for user consent management.

Customization and Configuration:

Website owners can customize tracking settings, set up goals, and define custom events for specific tracking needs.

Reporting and Insights:

Google Analytics provides a range of reports on user behavior, acquisition channels, conversion rates, and more.

Training and Support:

Website owners may need training on how to interpret and use Google Analytics reports effectively.

Monitoring and Maintenance:

Regular monitoring of analytics data to identify trends and make informed decisions for website optimization.