ASSIGNMENT 1

➢ *WHAT IS AJAX? ADVANTAGES OF AJAX?*

- **AJAX** short for "asynchronous JavaScript and XML"
- is a set of web development techniques that uses various web technologies on the client-side to create asynchronous web applications.
- With Ajax, web applications can send and retrieve data from a server asynchronously (in the background) without interfering with the display and behavior of the existing page.

➢ *Advantages of using AJAX include*:

- Enhances performance by reducing traffic and improving response time.
- Enables asynchronous processing.
- Reduces bandwidth usage.
- Provides a responsive and interactive user experience.
- Enhances user productivity.

➢ *WHAT IS JSON? WHY DO WE USE JSON?*

- JSON stands for **J**ava**S**cript **O**bject **N**otation
- JSON is a lightweight format for storing and transporting data
- JSON is often used when data is sent from a server to a web page
- JSON is "self-describing" and easy to understand

➢ *Why is Jason used?*

- JSON is a data interchanging format that uses human-readable text to transmit data objects consisting of data structure and it is the most widespread format for data serialization.

➢ *WHAT IS JQUERY? ADVANTAGES OF JQUERY?*

- jQuery is a small, fast, and lightweight JavaScript library.
- jQuery is platform independent.
- jQuery means "write less do more".
- jQuery simplifies AJAX call and DOM manipulation.

➢ *ADVANTAGES OF JQUERY*

- The main purpose of using jQuery is to make it much easier to use JavaScript on your modern and smart website.
- jQuery was developed to save the time of developers by reducing the code.

- It takes loads of common duties that requires a lot of lines of JavaScript code to perform and wrap them into strategies that you may name with a single line of code.

➢ *WHAT IS NO-SQL DATABASE? EXAMPLE?*

- *NoSQL originally referring to non-SQL or non-relational is a database that provides a mechanism for storage and retrieval of data.*
- *NoSQL databases are used in real-time web applications and big data and their use are increasing over time.*

➢ *EXAMPLE:*

- MongoDB, a document-based database that uses JSON and JavaScript
- Couchbase, a key-value and document database that supports cloud, mobile, and edge computing
- Cassandra, a column-based database that provides high availability and scalability
- HBase, a non-relational database that runs on top of Hadoop
- Redis, a key-value database that supports in-memory data structures

➢ *WHAT IS HTTP STATUS CODE? WHAT IS THE MEANING OF 401, 403, 404, 500 STATUS CODES?*

- *HTTP Protocol is used everywhere from the server page to each service communication, deploying service to monitoring service.*
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- *HTTP status code is used for search engine optimization of how your pages get indexed, as well as how search engines perceive the health of your site.*

➢ *WHAT IS THE MEANING OF 401, 403, 404, 500 STATUS CODES?*

- *HTTP status codes in the 401 series, such as 401, 403, and 404, are all client errors*
- *These codes indicate that the page was not found, and something is wrong with the requests or contains incorrect syntax*
- *401 indicates a refusal due to authentication.*
- *403 suggests a refusal for any other general reason beyond authentication23.*
- *404 indicates that the request has not been applied because the page was not found.*
- *500, also termed as "Internal Server Error," represents a server-side error, implying that the issue arises from the website's server and not the user's computer or internet connectivity.*