Week 5:

- **Day 1: Arrays Introduction:**

-Storing and manipulating lists of data with arrays.

.**What is Arrays** – An Arrays is a special type of object used to store multiple values in a single variable. Arrays can hold items of any data type, including numbers, strings, objects, and even other arrays. They are ordered collections, meaning that the items have a specific order and can be accessed using their index.

-Learned about array properties and methods.

. **Properties** – length, map(), of()

.**Methods** – push(), pop(), shift(), unshift(), join(), etc.

-Practiced creating arrays in JavaScript.

- **Day 2: Objects Introduction:**

-Organizing related data and functions using objects.

. In JavaScript, objects are used to organize and manage related data and functions. Objects are fundamental to JavaScript and are used to create more complex data structures and models. They are collections of key-value pairs where each key (also known as a property) is a string and each value can be of any data type, including functions.

-Studied object properties and methods.

. Properties – 'constructor' , _proto_

-Practiced creating and manipulating objects in JavaScript.

- **Day 3: Asynchronous Java Script Introduction:**

-Handling asynchronous operations in JavaScript.

. **Asynchronous Operation** - Asynchronous operations allow the program to perform tasks like data fetching or file reading without blocking the execution of other code. This is crucial for maintaining a responsive and smooth user experience in web applications.

-Learned about set timeout and set interval.

1) **Set timeout** – It is a built-in JavaScript function that allows you to execute a piece of code after a specified delay. It is commonly used in asynchronous programming to introduce delays or to schedule code execution in the future.

2) **Set interval** – It is a JavaScript function used to repeatedly execute a piece of code at specified intervals. Unlike 'setTimeout', which runs code only once after a delay, 'setInterval' runs the code repeatedly at a fixed time interval.

-Learn about Promises, error handling.

1) **Promises** – It is a solution of Callback in Asynchronous JavaScript.

2) **Error handling** - Error handling in JavaScript is a mechanism to manage and respond to errors or exceptions that occur during the execution of code.

- **Day 4: Async/Await Introduction:**

-Simplifying asynchronous code with async and await.

-Studied how to use async and await in JavaScript.

-Practiced writing clean and readable asynchronous code.

- **Day 5: Introduction to DOM Manipulation Introduction**

-Learning Objectives Understand the structure and purpose of the DOM.

-Learn how to select and manipulate HTML elements using JavaScript.

-Perform basic DOM manipulations like changing content, attributes, and styles.

Selecting DOM Elements:

Learn different methods to select elements:

- getElementById()
- getElementsByClassName()
- getElementsByTagName()
- querySelector()
- querySelectorAll()

- **Day 6: Introduction to APIs Introduction:**

-Understanding APIs and how to use them in JavaScript.

.**What is APIs** – APIs is a set of functions and protocols that allows different software applications to communicate with each other. APIs enable JavaScript to interact with other services, applications, or parts of the web platform.

-Learned about different types of APIs and their uses.

.**Types of APIs** – Web APIs, Third-Party APIs, Node.js APIs, Custom APIs

-Practiced making simple API calls using JavaScript.

- Fetch API Introduction:

-Using the Fetch API to retrieve data from a server.

-Studied the basics of the Fetch API and how to handle responses**.**

-Practiced fetching and displaying data on a webpage.