

Industry Project

Report

On

DEVS TREE

Developed By: -	Guided By:-
Anuj jani (21162102003)	Prof. Umang Thakkar sir (Internal)
	Mr. Arath patel sir (External)

Submitted to
Department of Computer Science & Engineering
Institute of Computer Technology



**Ganpat
University**
॥ विद्या समाजोत्कर्षः ॥

**Institute of
Computer
Technology**



Year - 2024

CERTIFICATE

This is to certify that the Industry Work as “react js inter” by Anuj jani (21162102003) of Ganpat University, towards the partial fulfillment of requirements of the degree of Bachelor of Technology – Computer Science and Engineering, carried out by them in the CSE (CBA) Department. The results/findings contained in this Project have not been submitted in part or full to any other University / Institute for award of any other Degree/Diploma.

Name & Signature of Internal Guid

Name & Signature of Head

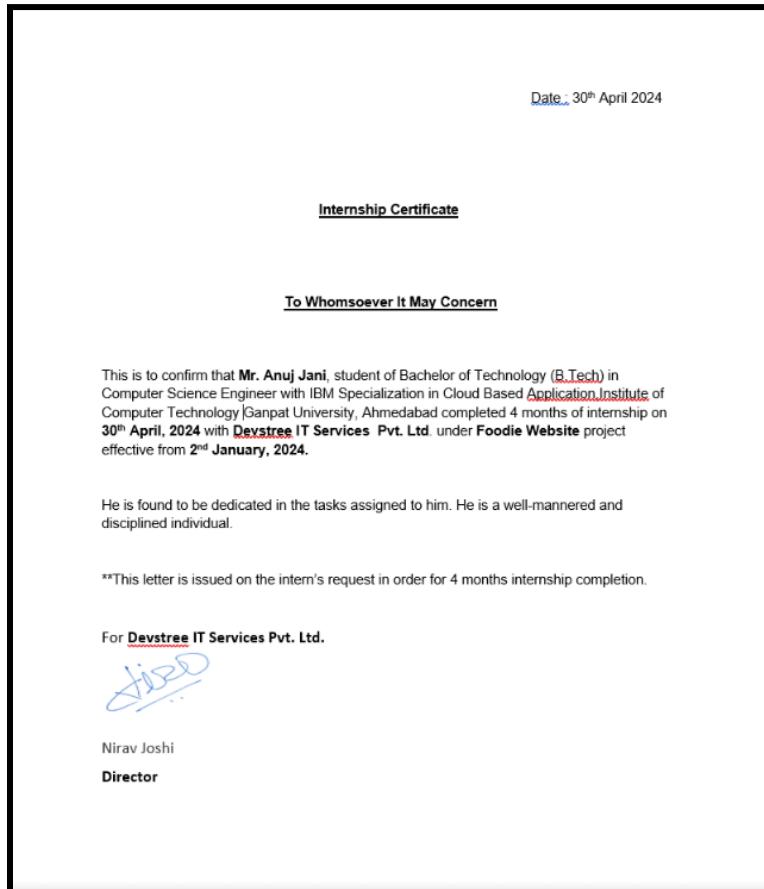
Place: ICT – GUNI

Date:

ACKNOWLEDGEMENT

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Certificate



Anuj Jani
21162102003

ABSTRACT

As an aspiring web developer, this report documents my immersive journey into the captivating world of React.js. Fueled by the desire to craft dynamic and user-centric interfaces, I embarked on a mission to leverage the power of this versatile JavaScript library. This experience was more than just building interfaces; it was a transformative exploration of component-based architecture, state management, and the art of creating engaging user experiences. My initial steps involved mastering the fundamentals of React. Understanding the concept of virtual DOM, JSX syntax, and component lifecycle became the building blocks of my learning. Pixel by pixel, I constructed reusable components, appreciating their modularity and promoting maintainability. This internship solidified my belief in React.js as a powerful tool for shaping the future of web development. Its component-based approach, developer-friendly ecosystem, and vast community empower developers to build performant, scalable, and user-centric web applications.

Index

Sr. No.	Title	Page No.
1	Introduction	1
2	Project - Scope	2
3	Requirements	3
4	Week 1	7-8
	4.1 HTML	7
	4.2 CSS	8
5	Week 2	9-12
	5.1 variables(let ,const,var)	9
	5.2 data types and Ecma	10
	5.3 Data Types and conversion	11
	5.4 Why string to number and operators in javascript	12
6	Week 3	13-16
	6.1 stack (primitive) heap(non-primitive)	13
	6.2 string	14
	6.3 Number and math	15
	6.4 Date and time	16
7	Week 4	17-20
	7.1 Array	17
	7.2 Array method	18
	7.3 Object	19
	7.7 function	20
8	week5	21-24
	8.1 Function with object	21
	8.2 Global scope and local scope	22
	8.3 loops	23
	8.4 Array loops (for each loop)	24
9	week6	25-28
	9.1 object destructuring	25
	9.2 This and arrow function	26
	9.3 control and flow statement ,	27
	9.4 map , reduce and filter	28
10	week7	29-32
	10.1 Dom manipulation	29
	10.2 Events	30
	10.3 callbacks and promises	31

	10.4	Aysic and fetch api	32
11	week8		33-36
	11.1	classes and objects	33
	11.2	try and catch	34
	11.3	advances javascript	35
	11.4	food-website	36
12	week9		37-40
	12.1	Introduction to react js	37
	12.2	Understanding the flow	38
	12.3	How to import and export the components	39
	12.4	props	40
13	week10		41-44
	13.1	Conditional Rendering	41
	13.2	Render-list	42
	13.3	understanding the tailwind css	43
	13.4	Events	44
14	week11		45-48
	14.1	States and Hooks	45
	14.2	use-effect	46
	14.3	working in nav section	47
	14.4	and understand how darkmode is work	48
15	week12		49-52
	15.1	use-ref	49
	15.2	Handling the events	50
	15.3	Working on the hero-section	51
	15.4	Working on service-section	52
16	week13		53-55
	16.1	React-Router	53
	16.2	COntext-hook	54
	16.3	Working on the Feedback and footer-section of food ui (wrapping up the project)	55
17	week14		56-58
	17.1	Use-Hooks	56
	17.2	useCallback hook	57
	17.3	Start working on the Brainwave	58
18	week15		59-61
	18.1	Nav-bar	59
	18.2	Understanding Material -user interface	60
	18.3	Working on the hero-section	61

19	week16		62-64
	19.1	Understanding bar chart js	62
	19.2	Working on the pricing-section	63
	19.3	Working on the feature-section	64
20	week17		65-67
	20.1	Working on the footer-section	65
	20.2	Working on the Collaboration-section	66
	20.3	Working on the how to use section	67
	Conclusion		68
	Reference		69

CHAPTER: 1 INTRODUCTION

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React JS is a well-liked JavaScript library for creating user interfaces, particularly for applications with only one page. It was created by Facebook and is presently kept up with by Facebook and a local area of individual designers and organizations.

React JS's key feature is its component-based architecture. Developers can construct complex user interfaces by breaking them down into smaller, reusable components. The code is more modular, easier to maintain, and more effective because each component manages its own logic and state.

React JS likewise gives a strong arrangement of elements for dealing with the condition of parts, like useState and useEffect. Developers can use these hooks to declaratively manage the state of components, making the code more predictable and easier to reason about.

CHAPTER: 2 PROJECT SCOPE

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The food website will provide users with a platform to browse and order food from various restaurants in their area.

The second project is to build a modern landing page with smooth animations that stand out from other websites.

The landing page will include a hero section with different shapes reacting to the cursor, a navigation bar with a colorful button that transforms into an animated hamburger menu on smaller screens, and a subtle smooth scroll parallax effect that moves the elements down as we scroll

CHAPTER: 3 Requirement

CHAPTER: 3 Requirement

Hardware Requirements

Processor	i5
RAM	4GB
SDD	512GB

Software requirement

Operating System	Windows,mac,linux etc
Programming language	javascript
Other tools & technologies	Vs code and replit

React js requirement

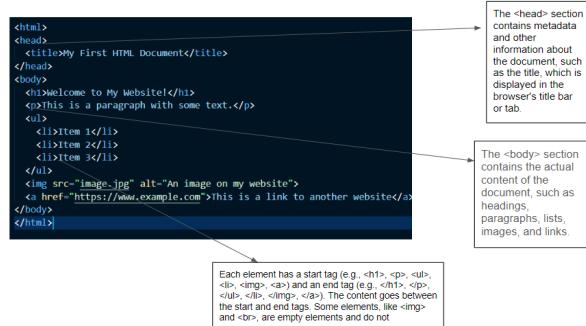
1	html,css
2	javascript , TailwindCss

Chapter 4: Week 1

4.1 HTML

- The most common markup language for creating web pages is HTML (HyperText Markup Language).
- Content is organized and formatted using a tag system. Other technologies are typically utilized when describing the appearance or presentation of a web page (using CSS) or its functionality or behavior (using JavaScript)..

Syntax



CODE

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>form tag</title>
</head>
<body>
    <h1>form to apply</h1>
    <form>
        <label for="username">enter the username</label>
        <input type="text" required name="username" placeholder="enter your username" id="username" autofocus>
        <br>
        <input type="radio" name="gender" id="male" value="male">
        <label for="male">male</label>
        <br>
        <input type="radio" name="gender" id="female" value="female">
        <label for="female">female</label>
        <br>
        <br>
        <input type="checkbox" id="class1" name="class" value="class1">
        <label for="class1">class1</label>
        <input type="checkbox" id="class2" name="class" value="class2">
        <label for="class2">class2</label>
        <input type="checkbox" id="class3" name="class" value="class3">
        <label for="class3">class3</label>
        <br>
        <br>
        <textarea name="feedback" id="feedback1" cols="30" rows="10">enter your feedback </textarea>
        <br>
        <br>
        <select>
            <option>apple</option>
            <option>banana</option>
        </select>
    </form>
</body>
</html>
```

Output

form to apply

enter the username

male

female

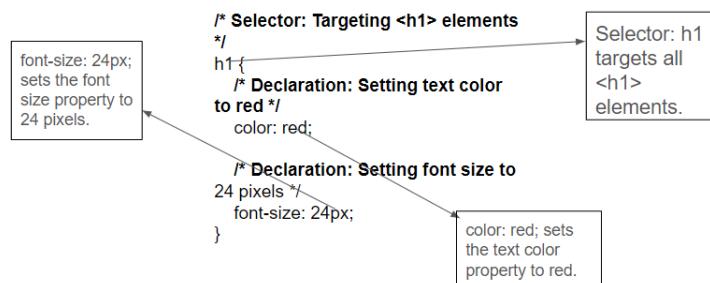
class1 class2 class3

enter your feedback

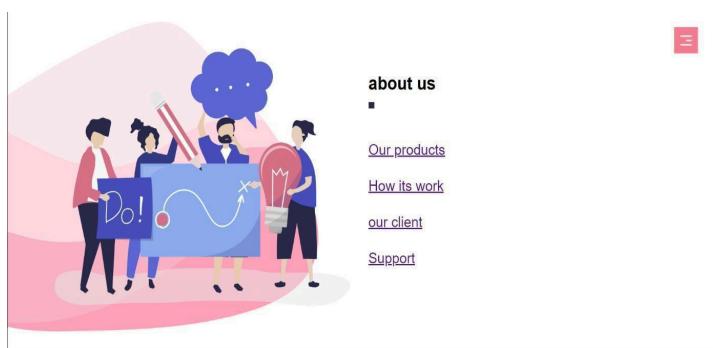
4.2 CSS

- CSS (Flowing Templates) is a template language utilized for portraying the look and designing of a record written in HTML or XML.
- It permits you to isolate the introduction of your record from its construction, making your code cleaner and more straightforward to keep up with.

Syntax



Output

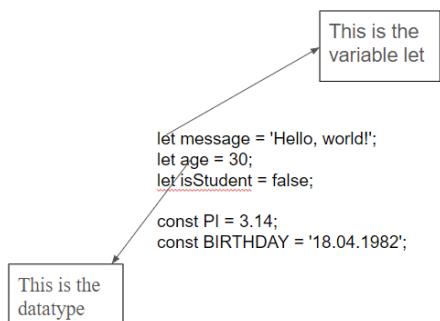


Chapter 5: (Week 2)

5.1 variable (let , const , var)

- A variable is a storage area (container) for data in programming. For instance, when declaring variables in JavaScript,
- A variable is a storage area (container) for data in programming. For instance, when declaring variables in JavaScript, we use either the var or the let keyword. Because var keywords are elevated (lifted) to the top of their scope, we did not use them. Because of this, a variable can be used before it has been declared.so for this scenarios we can used let , and const

Syntax



Code

```
<script>
let expenses = [];

function addExpense(event) {
    event.preventDefault();
    const amount = parseFloat(document.getElementById('amount').value);
    const category = document.getElementById('category').value;
    const date = document.getElementById('date').value;
    const expense = {
        amount: amount,
        category: category,
        date: date
    };
    expenses.push(expense);
    updateExpenseList();
    document.getElementById('expenseForm').reset();
}
```

The status bar at the bottom right shows "Server is Started at port:5500" and "Source: Live Server".

Output

Expense Tracker

Amount:

Category:

Date: dd-mm-yyyy

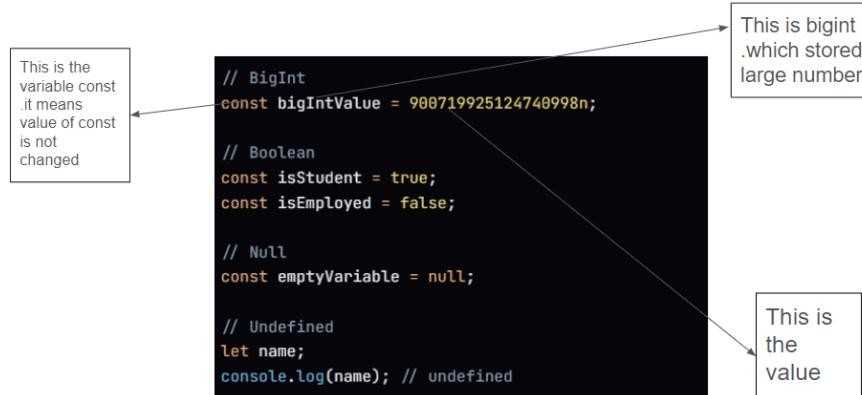
Expenses:

- Amount: \$21 | Category: shopping | Date: 2024-02-15

5.2 Data Types()

- As a dynamically typed language, JavaScript supports a variety of data types.
- There are two sorts of information type in javascript There are two different types of data. non-primitive and primitive()

Syntax



Code

```
<form id="expenseForm">
  <label for="amount">Amount:</label>
  <input type="number" id="amount" name="amount" required><br><br>

  <label for="category">Category:</label>
  <input type="text" id="category" name="category" required><br><br>

  <label for="date">Date:</label>
  <input type="date" id="date" name="date" required><br><br>

  <button type="submit">Add Expense</button>
</form>

<h2>Expenses:</h2>
<ul id="expenselist"></ul>

<script>
  // String
  let message = "Hello, world!";

  // Number
  let age = 25;
  let temperature = 98.6;

  // Boolean
  let isStudent = true;
  let hasCar = false;

  // Array
  let fruits = ["apple", "banana", "orange"];

  // Object
  let person = {
    name: "John"
}
```

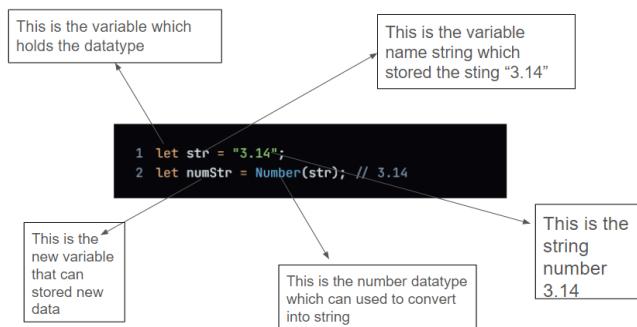
Output

```
String: Hello, world!
Number: 25 98.6
Boolean: true false
Array: ▶ Array(3)
Object: ▶ Object
Function: 15
Undefined: undefined
Null: null
|
```

5.3 Data Types and conversion

- The process of converting data from one type to another is known as type conversion in programming. Changing data from a string to a number, for instance.
- There are two sorts of type transformation in JavaScript: Automatic type conversion is implicit conversion. Manual type conversion is explicit conversion.

Syntax



Code

```
// String to Number
let strNumber = "123";
let num = Number(strNumber);
console.log(num); // Output: 123

// Number to String
let number = 456;
let str = String(number);
console.log(str); // Output: "456"

// String to Boolean
let strBoolean = "true";
let bool = Boolean(strBoolean);
console.log(bool); // Output: true

// Boolean to Number
let boolean = true;
let numFromBool = Number(boolean);
console.log(numFromBool); // Output: 1 (true is converted to 1, false would be converted to 0)
```

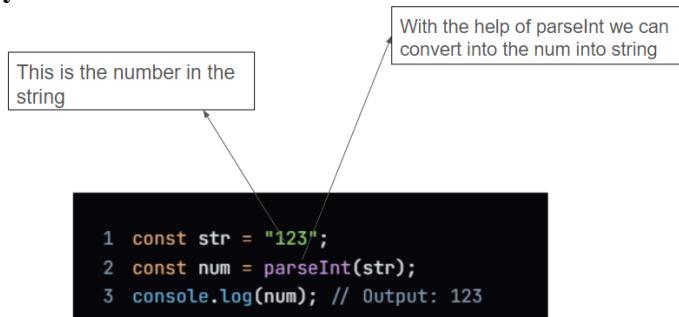
Output

```
123
456
true
1
false
10
10
10.5
> |
```

5.4 Why string to number and operators used in javascript

- Switching a string over completely to a number in JavaScript is a typical activity . There are numerous reasons to convert a number to a string;
- one of these is Data manipulation: While numbers are required for mathematical operations, strings typically represent data in a format that is readable by humans.
- Switching strings over completely to numbers permits you to perform computations, correlations, and other numeric tasks.

Syntax



Code

```
<script>
    function performAddition() {
        let num1 = document.getElementById('num1').value;
        let num2 = document.getElementById('num2').value;

        // Convert strings to numbers
        num1 = parseFloat(num1);
        num2 = parseFloat(num2);

        let result = num1 + num2;
        document.getElementById('result').textContent = `Result: ${result}`;
    }

    function performSubtraction() {
        let num1 = document.getElementById('num1').value;
        let num2 = document.getElementById('num2').value;

        // Convert strings to numbers
        num1 = parseFloat(num1);
        num2 = parseFloat(num2);

        let result = num1 - num2;
        document.getElementById('result').textContent = `Result: ${result}`;
    }

    function performMultiplication() {
        let num1 = document.getElementById('num1').value;
        let num2 = document.getElementById('num2').value;

        // Convert strings to numbers
        num1 = parseFloat(num1);
        num2 = parseFloat(num2);

        let result = num1 * num2;
        document.getElementById('result').textContent = `Result: ${result}`;
    }

    function performDivision() {
        let num1 = document.getElementById('num1').value;
        let num2 = document.getElementById('num2').value;

        // Convert strings to numbers
        num1 = parseFloat(num1);
        num2 = parseFloat(num2);

        let result = num1 / num2;
        document.getElementById('result').textContent = `Result: ${result}`;
    }

```

Calculator

Enter Number 1: Enter Number 2:

Result:

Result: 0.5217391304347826

Chapter 6: (Week 3)

6.1 stack (primitive) heap(non-primitive)

- The stack and the heap are the two main areas of a computer where data can be stored.
The stack is a more modest, quicker memory region utilized for putting away basic information types and data about capability calls.
- It deals with a "rearward in, first out" premise, implying that the latest data added is quick to be eliminated. The pile is a bigger, more slow memory region utilized for putting away complex information types, like items and exhibits.
- It's more adaptable than the stack, however it additionally requires more work to make due. The software engineer (or on account of JavaScript, the programmed trash specialist) is liable for designating and deallocating memory in the load.
- In conclusion, simple, short-term data can be stored in the stack, while more complex, long-term data can be stored in the heap.

Syntax(stack)

```
Primitive-datatype(stack)  
  
1 const myString = 'Hello, world!';  
2 const myNumber = 42;  
3 const myBoolean = true;  
4 const myNull = null;  
5 const myUndefined = undefined;  
6 const mySymbol = Symbol('mySymbol');  
7 const myBigInt = 123456789012345678901234567890n;
```

Syntax(heap)

```
Heap-Datatype  
  
1 const myObject = { key: 'value' };  
2 const myArray = [1, 2, 3];  
3 const myFunction = function() {  
4   return 'Hello, world!';  
5};
```

6.2 String

- a string in JavaScript is a grouping of characters used to address text.
- It is a crude information type, meaning a fundamental sort of information isn't an item and doesn't have strategies (in spite of the fact that JavaScript furnishes worked in techniques to work with strings).

Syntax

```
1 const greeting = "Hello, World!";
2 const str1 = greeting.substring(0, 5); // Extracts "Hello"
3 console.log(str1);
4
5 const str2 = greeting.substring(7, 11); // Extracts "World"
6 console.log(str2);
```

Variable name

This is the string method
The substring() method
extracts characters from the
index start up to and excluding
the index end

Code

💡 Click here to ask Blackbox to help you code faster

```
const name = "John";
const age = 25;
const city = "New York";

const greeting = `Hello, my name is ${name}. I am ${age} years old and I live in ${city}.`;

console.log(greeting);
```

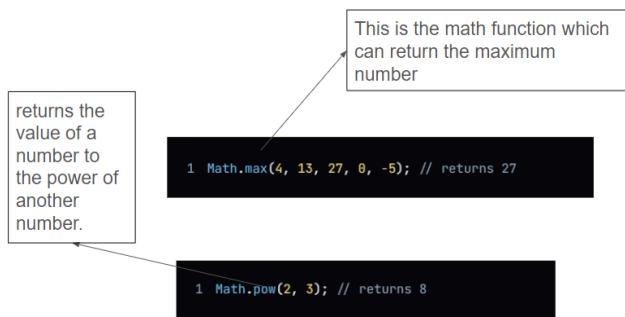
Output

```
Hello, my name is John. I am 25 years old and I live in New York.
Live reload enabled.
> |
```

6.3 Number and Math

- Numbers can be either floating-point numbers (decimals) or integers (whole numbers) in JavaScript.
- You can perform number-crunching activities like expansion, deduction, augmentation, and division on numbers. Here is a model:

Syntax



Code

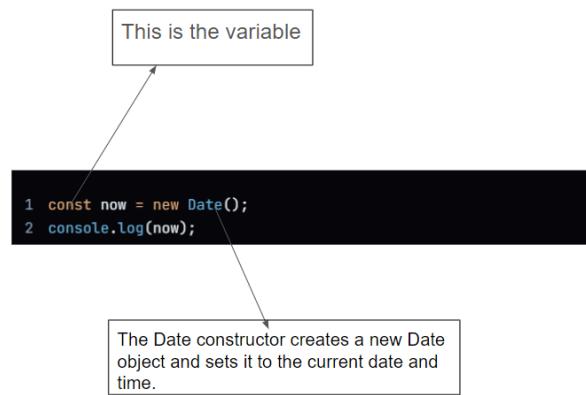
```
💡 Click here to ask Blackbox to help you code faster
Function alternateCasing(str) {
  let result = '';
  for (let i = 0; i < str.length; i++) {
    if (i % 2 === 0) {
      result += str[i].toUpperCase();
    } else {
      result += str[i].toLowerCase();
    }
  }
  return result;
}

$('.str').on('keyup change', function() {
  const str = $(this).val();
  const result = alternateCasing(str);
  $('#alternated').html(result);
});
```

6.4 Date and time

- When working with dates and times, JavaScript makes use of the Date object.
- It permits you to make, access, and control dates and times. This is an illustration of the way to make another Date object:
- A new Date object representing the current date and time will be created as a result of this. You can also pass in the year, month, day, hour, minute, second, and millisecond as arguments to create a Date object for a specific date and time:

Syntax



Code

```
let mydate = new Date()  
console.log(mydate.toString()) //we can just print the date  
console.log(mydate.toDateString()) //it can convert into the local string  
console.log(mydate.toLocaleString());  
console.log(mydate.toLocaleString()); //this is the object date  
  
//we also declare specific date  
let mycreatedate = new Date("1-1-2023") //in javascript month start from 0 to 11 jan - 0 and end with 23  
// console.log(mycreatedate.toDateString()); //it can gives with day like saturday // sat dec 23 2023  
console.log(mycreatedate.toLocaleString()); //it can gives with standard date // 23/12/2023  
  
// timestamp  
let timestamp = Date.now()  
console.log(timestamp);  
console.log(mycreatedate.getTime()); //converted into seconds  
console.log(Math.floor(Date.now() / 100));  
  
let newdate = new Date()  
console.log(newdate);  
console.log(newdate.getMonth() + 1);  
console.log(newdate.getDate());  
console.log(newdate.getFullYear());  
//  
// let newdate = new Date()  
// console.log(newdate.getHours());  
// console.log(newdate.getFullYear());  
// console.log(newdate.getDate() + 1);
```

Output

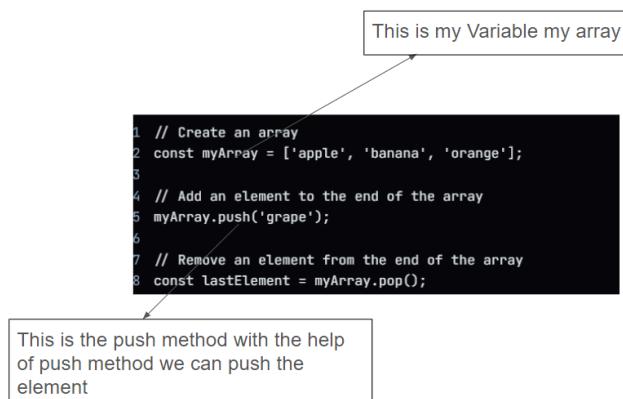
```
08/02/2024, 21:22:49  
Thu Feb 08 2024  
08/02/2024, 21:22:49  
object  
14/01/2023, 00:00:00  
1707407569511  
1673634600000  
17074075695  
Thu Feb 08 2024 21:22:49 GMT+0530 (India Standard Time)  
2  
4  
1707407569512  
21  
2024  
9  
> |
```

Chapter 7: (Week 4)

7.1 Array

- An array is a type of data structure that can hold multiple values in a single variable. These values can be of any type, such as numbers, strings, objects, or even other arrays. Arrays are useful for storing and working with sets of related data.
- There are many other methods available for working with arrays in JavaScript, including methods for sorting, filtering, and mapping. You can find more information in the JavaScript documentation.

Syntax



Code

```
<script>
// arrays = array is the collection of same datatype and it is non-primitive datatypes
const array = [0,1,2,3,4,true] //array value start from 0
const myheros = ["spiderman","captionamerica","ironman","shaktiman","krish"]

//Array methods

// let myheros = ["spiderman","batman","superman","ironman","captionamerica"]
myheros.push("thor") //we can add at the end of the array
myheros.pop("thor", "captionamerica") //pop is deleted from last no from first
myheros.unshift("krish") //unshift is like the push method but we can add the new element from first
myheros.shift("krish") //in shift we can remove the element from
console.log(myheros.includes("spiderman")) //by using include method it can shows the value is exist or not by using true or false
console.log(myheros.indexOf("spiderman")) //by using the index of it can shows the real index number
const arr = myheros.join() //by using join it can convert into string
console.log(myheros);
console.log(arr);

//slice or splice

let a = [1,2,3,4,5,6,7,8,9]
console.log(" A ", a);

const arr1 = a.slice(1,3) //the difference between slice and splice in JavaScript is that slice returns a new array with a portion
console.log(arr1);

console.log(" B ", a);

let arr2 = a.splice(1,3) //while splice modifies the original array by adding or removing elements in place.
console.log(arr2)
```

Output

```
true
0
▶ (5) ['spiderman', 'captionamerica', 'ironman', 'shaktiman', 'krish']
spiderman,captionamerica,ironman,shaktiman,krish
A ▶ (9) [1, 2, 3, 4, 5, 6, 7, 8, 9]
▶ (2) [2, 3]
B ▶ (9) [1, 2, 3, 4, 5, 6, 7, 8, 9]
▶ (3) [2, 3, 4]
>
```

7.2 Array Methods

- For working with arrays, which are lists of values that can be of any data type, JavaScript provides a number of built-in methods.
- Here are some regularly utilized exhibit techniques: push(): Adds at least one components to the furthest limit of a cluster. pop():
- Eliminates the last component from a cluster and brings it back. shift(): Eliminates the main component from a cluster and brings it back. unshift(): Adds at least one components to the start of a cluster.

Code

```
<!DOCTYPE html>
<html>
<body>
<h1>JavaScript Arrays</h1>
<h2>The unshift() Method</h2>

<p>The unshift() method returns the length of the new array:</p>

<p id="demo1"></p>
<p id="demo2"></p>

<script>
const fruits = ["Banana", "Orange", "Apple", "Mango"];
document.getElementById("demo1").innerHTML = fruits.unshift("Lemon");
document.getElementById("demo2").innerHTML = fruits;
</script>

</body>
</html>
```

JavaScript Arrays

The unshift() Method

The unshift() method returns the length of the new array:

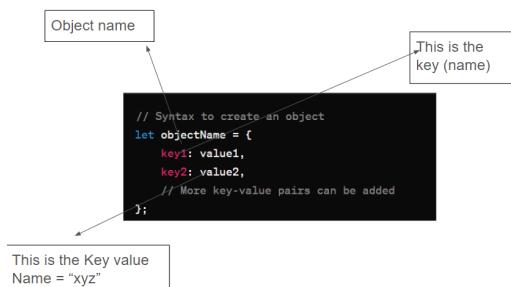
5

Lemon,Banana,Orange,Apple,Mango

7.3 Object

- A container for storing related data and functionality is an object. It resembles a case with named compartments, where each mark (or "key") relates to a piece of information (or "worth").
- The values can be any data type, including numbers, strings, arrays, other objects, functions, or even undefined, while the keys are always strings (or symbols). Objects are a principal information type in JavaScript and are utilized to address complex elements with properties and conduct.

Syntax



Code

```
let person = {
  firstName: "John",
  lastName: "Doe",
  age: 30,
  email: "john@example.com",
  address: {
    street: "123 Main St",
    city: "Anytown",
    country: "USA"
  },
  // Method to display full name
  fullName: function() {
    return this.firstName + " " + this.lastName;
  }
};

// Accessing object properties
console.log(person.firstName); // Output: John
console.log(person.age); // Output: 30

// Accessing nested object properties
console.log(person.address.city); // Output: Anytown

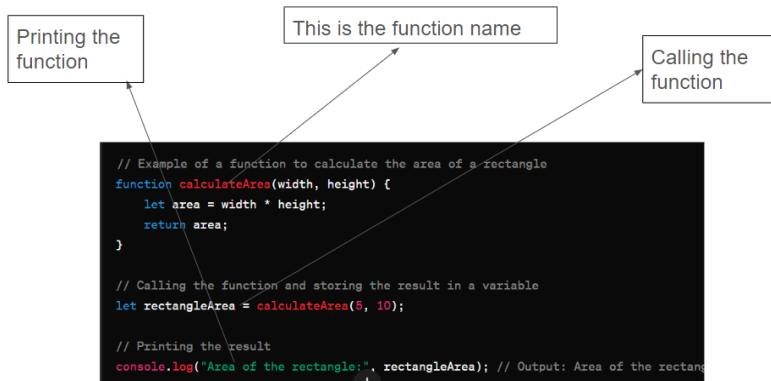
// Calling object method
console.log(person.fullName()); // Output: John Doe
```

```
John
30
Anytown
John Doe
Live reload enabled.
```

7.4 Function

- A block of code known as a function can be defined and later executed.
- Functions are one of the basic structure blocks of JavaScript programming and are utilized to typify reusable bits of code, making your projects more secluded

syntax



Code

```
💡 Click here to ask Blackbox to help you code faster
// Define a function to calculate total price
function calculateTotalPrice(cart) {
    let totalPrice = 0;

    // Iterate through each item in the cart
    for (let item of cart) {
        // Add the price of each item to the total price
        totalPrice += item.price * item.quantity;
    }

    // Return the total price
    return totalPrice;
}

// Example shopping cart with items
let shoppingCart = [
    { name: "Laptop", price: 1000, quantity: 1 },
    { name: "Headphones", price: 100, quantity: 2 },
    { name: "Mouse", price: 20, quantity: 3 }
];

// Call the function to calculate total price
let total = calculateTotalPrice(shoppingCart);

// Display the total price
console.log("Total price of items in the shopping cart:", total);
```

Output

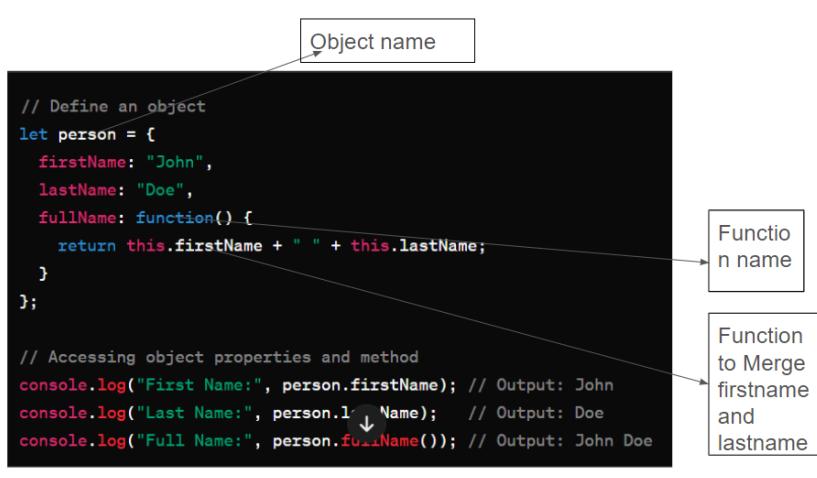
```
Total price of items in the shopping cart: 1260
Live reload enabled.
|
```

CHAPTER NO 8 : (week5)

8.1 Function with object

- By passing the object to the function as a parameter, you can define a function in JavaScript that works on an object.
- A function that takes an object as a parameter and uses its properties to carry out some action is shown in the following example:

Syntax



Code

```
function add(a,b) {
  return `${a+b}` your solution
}
console.log((add(3,4)));

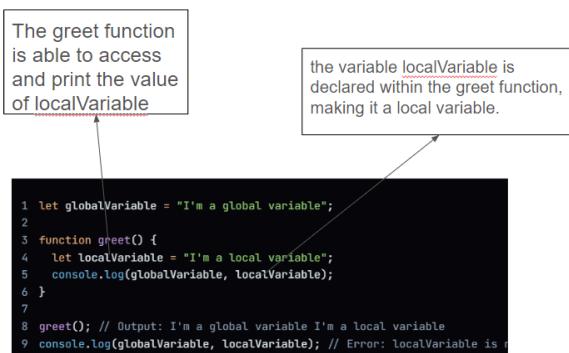
// function with objects
const name = {
  name:"anuj",
  fullname:"anuj jani",
}
name.name="wolf"
console.log(name);
// rest operator or spread operator
function addcalculo (val1,val2,...num1){
  return num1
}
console.log(addcalculo(200,400,500,2000));

const user = {
  username:"anuj",
  price:34
}
function handleobject(anyobject){
  console.log(`username is ${anyobject.username} and it prices is ${anyobject.price}`);
}
handleobject(user)
```

8.2 Global scope and local scope

- Scope in JavaScript alludes to the perceptibility and availability of factors in your code. To put it another way, it decides where a variable can be accessed and used. In JavaScript, scope is divided into two main categories:
- Global scope: Variables with global scope are declared outside of any function or block. Any section of the code can be used to access and modify them.
- Neighborhood scope: Factors pronounced within a capability or block have nearby degree. They can only be accessed and modified inside the declared function or block.

Syntax



Code

```
▼ Click here to ask Blackbox to help you code faster
var globalVariable = "I am a global variable";

function foo() {
    console.log(globalVariable); // Accessible inside functions
}

console.log(globalVariable); // Accessible outside functions
```

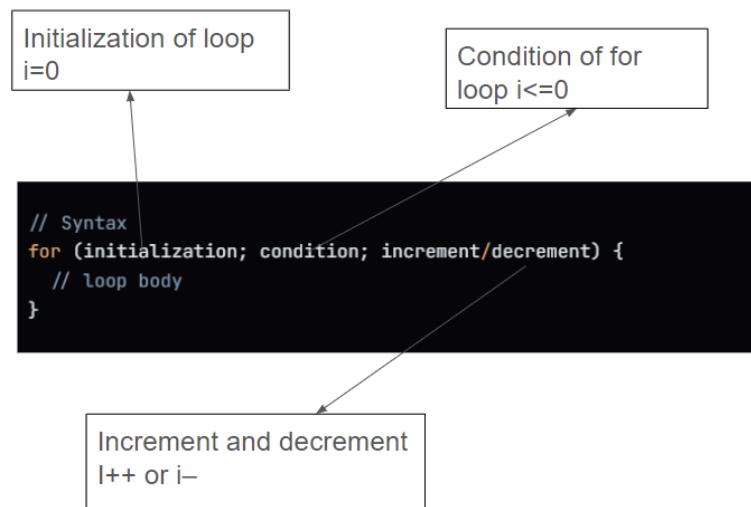
Output

```
I am a global variable
```

8.3 loops

- Loops are used in programming to repeat a block of code multiple times, as long as a certain condition is met. In JavaScript, there are several types of loops available, including for, while, and do...while loops.
- The initialization section is where you set the starting value for your loop counter. The condition section is where you specify the condition that must be true for the loop to continue executing. The increment/decrement section is where you update the loop counter after each iteration.

Syntax



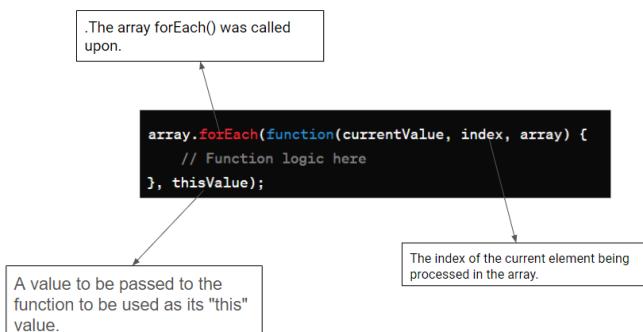
Code

```
Click here to ask Blackbox to help you code faster
// while (condition) {
//   ... // code block to be executed
// }
let i = 0;
do {
  console.log(i);
  i++;
} while (i < 5);
const person = {name: 'John', age: 30, city: 'New York'};
for (let key in person) {
  console.log(` ${key}: ${person[key]}`);
}
const arr = [1, 2, 3, 4, 5];
for (let num of arr) {
  console.log(num);
}
```

8.4 Array loops (for each loop)

- Array loops are used to go through each element of an array and do something with it.
There are several ways to loop through an array in JavaScript, including Traditional for loops: This is the most basic way to loop through an array.
- You can use a for loop to iterate over the array and access each element using its index.
Here's an example:`forEach()` method: This is a method available on arrays that allows you to iterate over each element and perform an action on it. Here's an example:`for...of` loop: This is a newer way to loop through arrays in JavaScript.
- It allows you to iterate over the values of an array directly, without having to use an index. Here's an example:`map()` method: This is a method available on arrays that allows you to create a new array by applying a function to each element in the original array.
Here's an example:

Syntax



Code

```
const array = [1, 2, 3, 4, 5];
for (let element of array) {
  console.log(element);
}
const array2 = [1, 2, 3, 4, 5];

const newArray = array.map(function(element) {
  return element * 2;
});

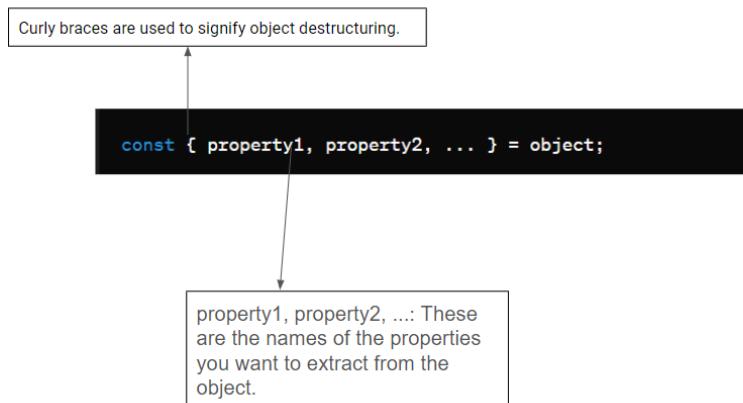
console.log(newArray); // output: [2, 4, 6, 8, 10]
```

CHAPTER 9 : (Week 6)

9.1 object destructuring

- Object destructuring is a way to extract values from an object and assign them to variables in a simpler and more readable way.
- It's a handy feature in JavaScript that can help you write cleaner code when working with objects.

Syntax



Code

```
<title>Document</title>
</head>
<body>
  <script>

    const car = {
      make: 'Toyota',
      model: 'Corolla',
      year: 2020,
      features: {
        engine: '1.8L',
        transmission: 'Automatic',
        fuelType: 'Petrol'
      }
    };

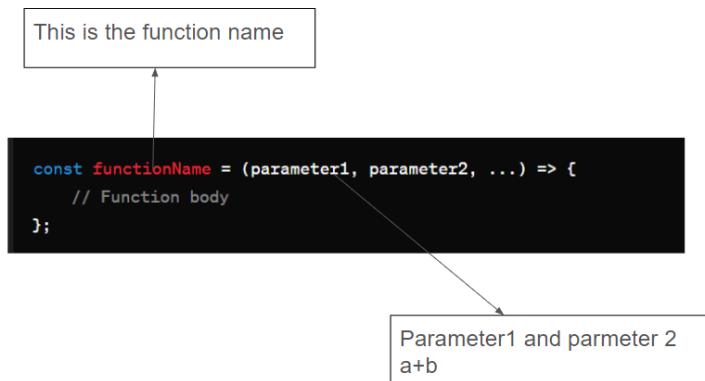
    // Function using object destructuring
    const printCarInfo = ({ make, model, year, features: { engine, transmission, fuelType } }) => {
      console.log(`Car: ${year} ${make} ${model}`);
      console.log(`Engine: ${engine}, Transmission: ${transmission}, Fuel Type: ${fuelType}`);
    };

    // call the function with the car object
    printCarInfo(car);
  </script>
</body>
</html>
```

9.2 this with arrow function

- In JavaScript, the this keyword is used to refer to the current context or object that a function is called on. In other words, it refers to the object that "owns" the function. In regular functions,
- the value of this depends on how the function is called. If the function is called as a method of an object, this refers to that object. If the function is called as a standalone function, this refers to the global object (window in a browser or global in Node.js).

Syntax



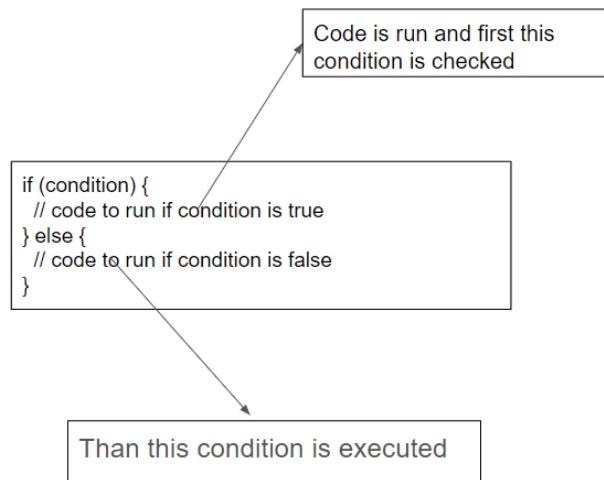
Code

```
1 class Animal {\n2     constructor(name) {\n3         this.speed = 0;\n4         this.name = name;\n5     }\n6     run(speed) {\n7         this.speed = speed;\n8         alert(`${this.name} runs with speed ${this.speed}.`);\n9     }\n10    stop() {\n11        this.speed = 0;\n12        alert(`${this.name} stands still.`);\n13    }\n14 }\n15\n16 let animal = new Animal("My animal");
```

9.3 control flow

- Conditional statements are used in programming to make decisions based on certain conditions.
- They allow you to execute different blocks of code depending on whether a certain condition is true or false.
- The main difference between try and catch and if-else conditions is that try and catch are used for error handling, while if-else conditions are used for decision making.

Syntax



Code

```
let num = 5;

switch (num) {
  case 0:
    console.log("Number is zero.");
    break;
  case 1:
    console.log("Number is one.");
    break;
  case 2:
    console.log("Number is two.");
    break;
  default:
    console.log("Number is greater than 2.");
};
```

9.4 map reduce and filter

- Map, reduce, and filter are JavaScript array methods that can be used to transform or compute new arrays based on an existing one. Every strategy takes a capability as a contention and applies it to every component in the array. The map technique makes another exhibit with the consequences of calling a gave capability on each component in the cluster.
- The lessen strategy applies a capability against a gatherer and every component in the cluster (from left to right) to decrease it to a solitary result value.
- The channel technique makes another exhibit with all components that breeze through the assessment executed by the gave capability.

Syntax

```
Map is used to transform each element of an array into another element, creating a new array with the same length.  
const newArray = array.map((currentValue, index, array) => {  
    // return new element  
});  
  
Filter is used to create a new array with only elements that pass a certain condition.  
const newArray = array.filter((currentValue, index, array) => {  
    // return true if element passes condition, false otherwise  
});  
  
Reduce is used to "reduce" an array into a single value. It iterates through each element, applying any and accumulate a result.  
const result = array.reduce((accumulator, currentValue, index, array) => {  
    // return updated accumulator  
}, initialValue);
```

Code

```
const numbers = [1, 2, 3, 4, 5];  
  
// Using map to double each element, then filter to get only even numbers, and  
// finally reduce to calculate their sum  
const sumOfDoubledEvenNumbers = numbers  
    .map(num => num * 2) // Double each element  
    .filter(num => num % 2 === 0) // Filter only even numbers  
    .reduce((accumulator, currentValue) => accumulator + currentValue, 0); //  
    // Calculate sum  
  
console.log(sumOfDoubledEvenNumbers); // Output: 24 (2 * 2 + 4 * 2)
```

Output

```
node /tmp/S9c3tUR42Q.js
```

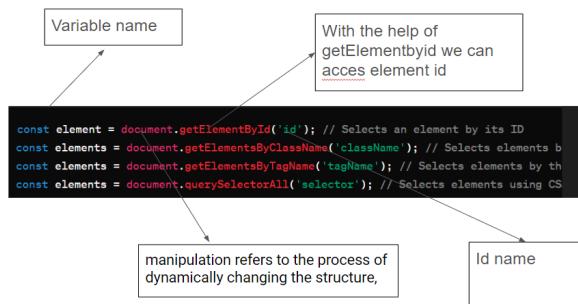
```
30
```

CHAPTER 10 : (Week 7)

10.1 Dom Manipulation

- When creating web pages and applications, it's common to modify the structure of the documents in some way.
- This is usually done using the Document Object Model (DOM), which is a set of APIs for controlling HTML and styling data using the Document object.
- The DOM represents the document as a tree of nodes, where each node corresponds to an element or a piece of text in the HTML. You can manipulate the DOM by selecting nodes, adding or removing nodes, and changing their attributes or content.

Syntax



Code

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>DOM Manipulation Example</title>
<style>
.highlight {
    background-color: yellow;
}
</style>
</head>
<body>
    <h1 id="mainHeading">Welcome to DOM Manipulation Example!</h1>
    <p>This is a paragraph. Click the button to change its style.</p>
    <button id="changeStyleButton">Change Style</button>

    <script>
        // Function to change the style of the paragraph
        function changeStyle() {
            var paragraph = document.querySelector('p');
            paragraph.classList.toggle('highlight');
        }
        // Add event listener to the button
        document.getElementById('changeStyleButton').addEventListener('click', changeStyle);
    </script>
</body>
</html>
```

Output

Welcome to DOM Manipulation Example!

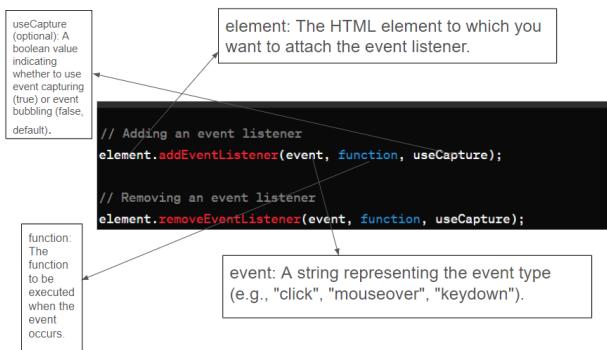
This is a paragraph. Click the button to change its style.

Change Style

10.2 Events

- Events in JavaScript are actions or occurrences that happen in the browser, such as clicking a button or loading a page.
- You can write code that runs in response to these events, allowing you to create interactive and dynamic web pages. To use events in JavaScript, you first need to attach an event listener to an element by using element.addEventListener

Syntax



Code

```
</head>
<body>
  <button id="myButton">Click Me!</button>
  <div id="output"></div>

  <script>
    // Get a reference to the button and output div
    var button = document.getElementById('myButton');
    var output = document.getElementById('output');

    // Function to be executed when the button is clicked
    function handleClick() {
      output.textContent = 'Button clicked!';
    }

    // Add an event listener to the button
    button.addEventListener('click', handleClick);

    // Function to be executed when the mouse enters the button
    function handleMouseEnter() {
      button.textContent = 'Mouse over!';
    }

    // Function to be executed when the mouse leaves the button
    function handleMouseLeave() {
      button.textContent = 'Click Me!';
    }

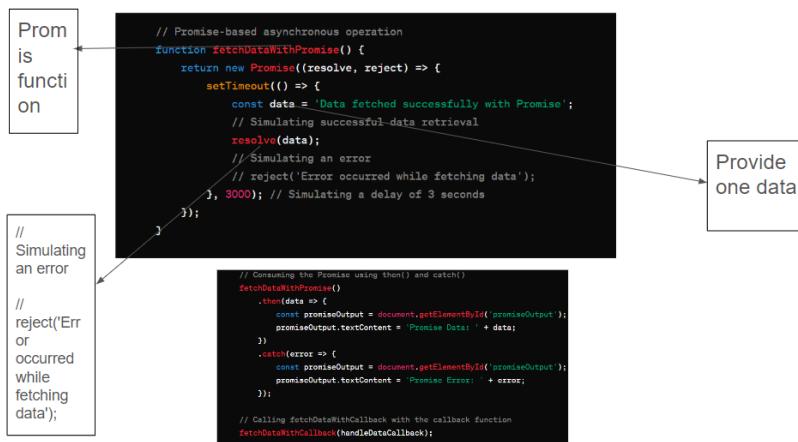
    // Add event listeners for mouse enter and leave events
    button.addEventListener('mouseenter', handleMouseEnter);
    button.addEventListener('mouseleave', handleMouseLeave);
  </script>
```

hey i am the box
change content

10.3 Callbacks and Promises

- Promises are utilized in JavaScript to manage asynchronous actions. It is an affirmation that something will be finished.
- The commitment is utilized to monitor regardless of whether the nonconcurrent occasion has been executed and figures out what occurs after the occasion has happened.
- A promise is like a pledge or a guarantee that something will be done in the future.

Syntax



Code

```
<script>
    function handleDataCallback(error, data) {
        const callbackOutput = document.getElementById('callbackOutput');
        if (error) {
            callbackOutput.textContent = 'Callback Error: ' + error;
        } else {
            callbackOutput.textContent = 'Callback Data: ' + data;
        }
    }

    // Promise-based asynchronous operation
    function fetchDataWithPromise() {
        return new Promise((resolve, reject) => {
            setTimeout(() => {
                const data = 'Data fetched successfully with Promise';
                // Simulating successful data retrieval
                resolve(data);
                // Simulating an error
                // reject('Error occurred while fetching data');
            }, 3000); // Simulating a delay of 3 seconds
        });
    }

    // Consuming the Promise using then() and catch()
    fetchDataWithPromise()
        .then(data => {
            const promiseOutput = document.getElementById('promiseOutput');
            promiseOutput.textContent = 'Promise Data: ' + data;
        })
        .catch(error => {
            const promiseOutput = document.getElementById('promiseOutput');
            promiseOutput.textContent = 'Promise Error: ' + error;
        });

```

Callback and Promise Example

Callback Data: Data fetched successfully with callback
Promise Data: Data fetched successfully with Promise

10.4 Aysic and fetch api

- In JavaScript, promises are used to handle asynchronous operations, such as making API requests or reading files.
 - To work with promises more easily, we can use the `async` and `await` keywords. The `async` keyword is used before a function to indicate that it returns a promise.
 - This means that we can use the `await` keyword inside the function to pause its execution and wait for a promise to resolve before continuing.

Syntax

We define an async function `fetchData()` which fetches data from a remote API endpoint (`https://jsonplaceholder.typicode.com/posts/1`) using the `Fetch API`.

```
<script>
    async function fetchData() {
        try {
            const response = await fetch('https://jsonplaceholder.typicode.com/posts/1');
            if (!response.ok) {
                throw new Error('Network response was not ok');
            }
            const data = await response.json();
            return data;
        } catch (error) {
            throw new Error(`Error fetching data: ${error.message}`);
        }
    }
}
```

Inside `fetchData()`, we use `await` to wait for the response from the API. We first check if the response is successful (`response.ok`). If not, we throw an error.

Code

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Async/Await with Fetch API Example</title>
</head>
<body>
    <h2>Async/Await with Fetch API Example</h2>
    <div id="output"></div>

    <script>
        async function fetchData() {
            try {
                const response = await fetch('https://jsonplaceholder.typicode.com/posts/1');
                if (!response.ok) {
                    throw new Error('Network response was not ok');
                }
                const data = await response.json();
                return data;
            } catch (error) {
                throw new Error(`Error fetching data: ${error.message}`);
            }
        }
    </script>
</body>
</html>
```

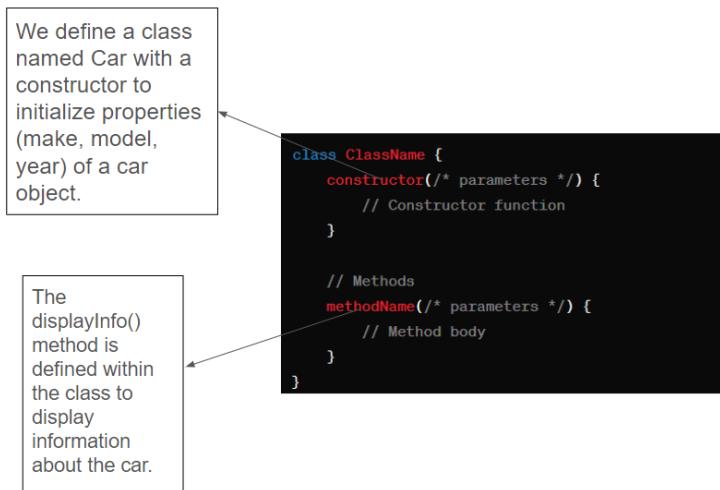
Async/Await with Fetch API Example

Chapter 11 : (week8)

11.1 Classes And Object

- In programming, a class is like a blueprint or a plan that defines the characteristics and features of an object. Think of it like a architectural design for a house, which outlines the details of doors, windows, floors, and more. Just as one house plan can be used to build multiple houses, a single class can be used to create multiple objects.
- The class itself isn't a real entity, but rather a template or a mold that shapes the objects created from it.
- This concept was introduced in ES6, replacing the traditional use of functions, and allows developers to create objects with specific properties and behaviors, making it a powerful tool in programming.

Syntax



Code

```
class OOPS {
  constructor(name) {
    this.name = name;
  }

  // Getter method
  get langName() {
    return this.name;
  }

  // Setter method
  set langName(x) {
    this.name = x;
  }
  hello(){
    console.log(`Hello ${this.name}`);
  }
}

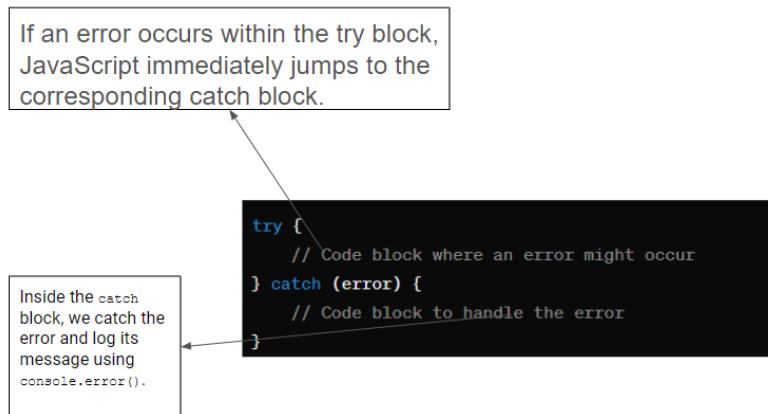
let obj = new OOPS('JavaScript');
console.log(obj.name);

obj.langName = 'Java';
console.log(obj.name);
```

11.2 try and catch

- When coding in JavaScript, errors can happen, but we can use the try...catch...finally combo to handle them without stopping the script.
- The try part is like a test zone where we put the code that might cause an error. If an error occurs, the catch part kicks in to fix the issue or provide a backup plan.
- And finally, the finally part runs regardless of whether an error happened or not, like a cleanup crew. It's important to note that try...catch is for handling unexpected runtime errors, whereas if..else statements are for controlling the program's flow based on specific conditions - two different tools for different jobs!

Syntax



Code

```
<p id="demo"></p>

<script>
try {
    adddler("Welcome guest!");
}
catch(err) {
    document.getElementById("demo").innerHTML = err.message;
}
</script>
```

11.3 Advances javascript

- Get a firm grasp of closures and scope in JavaScript, from the fundamentals to advanced methods. This guide will help you understand how they operate and how to apply them to create more efficient and maintainable code. Additionally, learn about the latest features of ES6 in JavaScript and what the future holds for this programming language. Explore real-world code examples and discover the advantages of using the latest version. Stay ahead of the curve with this informative article.
- Closures and scope are essential concepts in JavaScript. A closure is a function that has access to variables in its parent scope, even after the parent function has finished executing. This feature allows for powerful programming techniques, such as creating private variables and encapsulating functionality. Scope, on the other hand, refers to the visibility of variables in different parts of the code. Understanding scope is crucial for avoiding naming conflicts and ensuring that variables are accessible when and where they are needed.

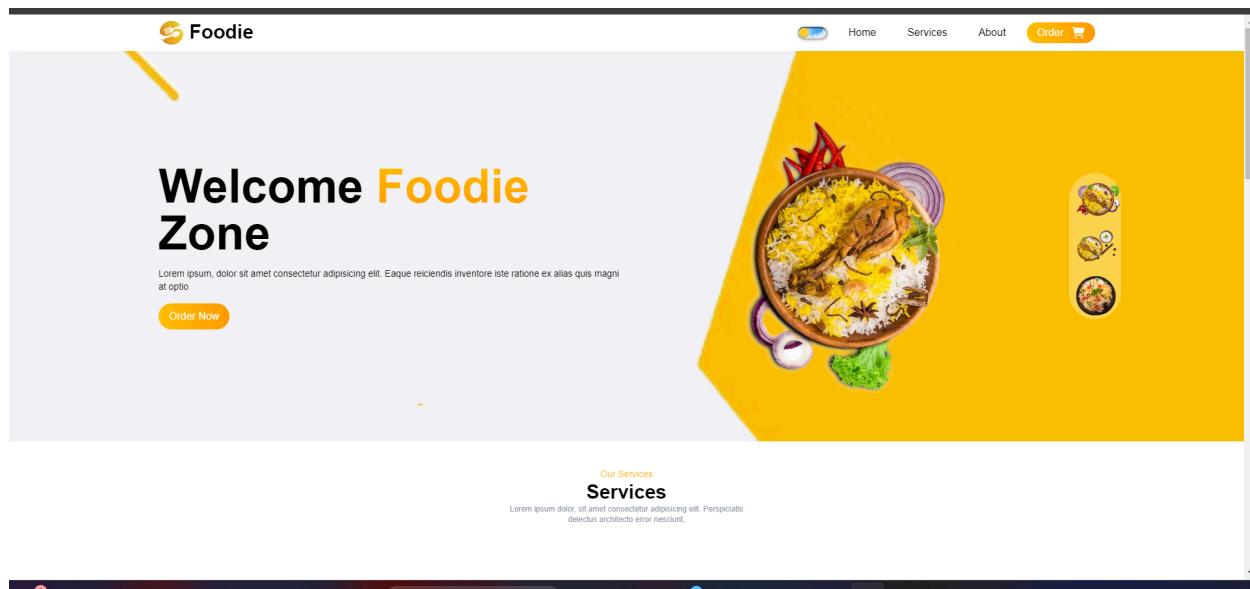
Code

```
class Person {  
    // Method to greet  
    greet() {  
        console.log(`Hello, my name is ${this.name} and I'm ${this.age} years old`);  
    }  
  
    // Define a function to fetch user data asynchronously  
    async function fetchUserData(username) {  
        const response = await fetch(`https://api.example.com/users/${username}`);  
        const userData = await response.json();  
        return userData;  
    }  
  
    // Main function  
    async function main() {  
        try {  
            // Fetch user data  
            const userData = await fetchUserData('john_doe');  
  
            // Destructure user data object  
            const { name, age } = userData;  
  
            // Create a new Person instance  
            const person = new Person(name, age);  
  
            // Greet the person  
            person.greet();  
        } catch (error) {  
            console.error('Error fetching user data:', error);  
        }  
    }  
  
    // Call the main function  
    main();  
}
```

Foodie-website

Tools = vs code , Rapid Api , Freepik , free icons

Technology = Javascript , react , html , Tailwind Css



CHAPTER NO 12 : (week 9)

12.1 Introduction To The React js

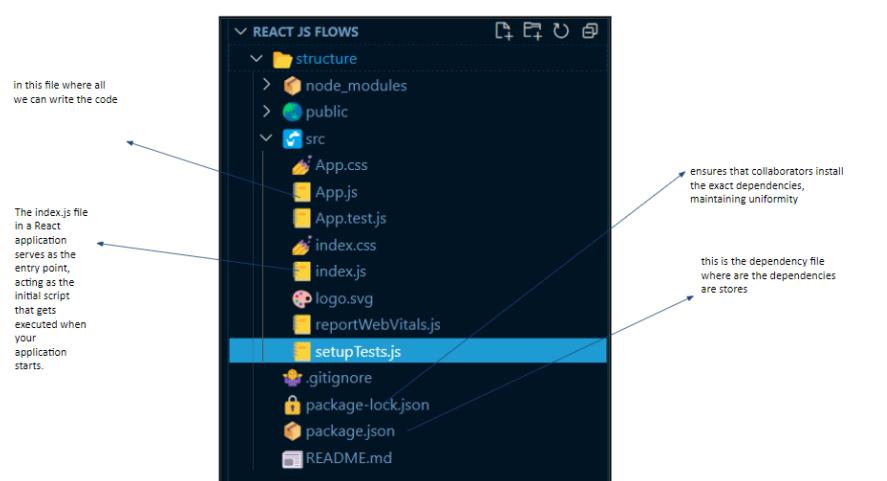
- ReactJS is a JavaScript library for creating user interfaces that's frequently updated with new features. The latest stable version, 18.2.0, was released in June 2022, with the first version coming out in May 2013. ReactJS is well-known for its speed, flexibility, and strong community support.
- What makes ReactJS stand out is its component-based structure. This means that complex code is broken down into smaller, individual pieces called components, making it easier for developers to organize and manage their code.
- Many companies are adopting ReactJS, making it a valuable skill for both beginners and experienced developers to learn. With its frequent updates, ReactJS continues to be a popular choice for building user interfaces, offering new features and improvements to help developers create better, more efficient code. In simple terms, ReactJS is a tool for building user interfaces in JavaScript. It's easy to use, flexible, and has a large community of developers who can help if you get stuck. By breaking down code into smaller components, ReactJS makes it easier to manage and maintain, making it a popular choice for building modern user interfaces.

```
<!--what is the react js for
=>ReactJS is updated so frequently, that it is quite difficult to navigate the version,
which comes with new features every time, each time it comes with new features.
The current stable version of ReactJS is 18.2.0
and released on June 14, 2022 and the
first release was on May 29, 2013.

->
```

12.2 React js flows and structure

- The structure of a ReactJS project is organized into an "src" directory that contains the source code for the app. Within this directory, there are several folders that hold different types of code:
- The "actions" and "reducers" folders contain Redux-specific code, which is used for managing the state of the app.
- The "components" folder contains the individual React components that make up the app.
- The "styles" folder holds the CSS styles for the app.
- The "utils" folder contains utility functions that can be used throughout the app.
- By organizing the code in this way, it's easier to manage and maintain, especially as the app grows in size and complexity. Each folder has a specific purpose, making it easy to find and modify the code as needed.



12.3 Import and export the components in react js

- In React, you can share components with other parts of your code using the export keyword.Named Exports:
- You can give a name to the component and then use the export keyword before its declaration. This way, you can import the component by its name in other parts of your code. Named exports are useful when you want to export multiple components from the same file, as you can give each component a unique name and import them individually.

Syntax

```
import exported components,
functions, or variables into
another file using the import
keyword.

// Component.js
import React from 'react';

class MyComponent extends React.Component {
    // Component code...
}

export default MyComponent;
```

Code

```
import React from 'react'

const Footer = () => {
  return (
    <footer>
      <p>&copy; {new Date().getFullYear()} your website is safe </p>
    </footer>
  )
}

export default Footer
```

```
💡 Click here to ask Blackbox to help you code faster
import React from 'react'

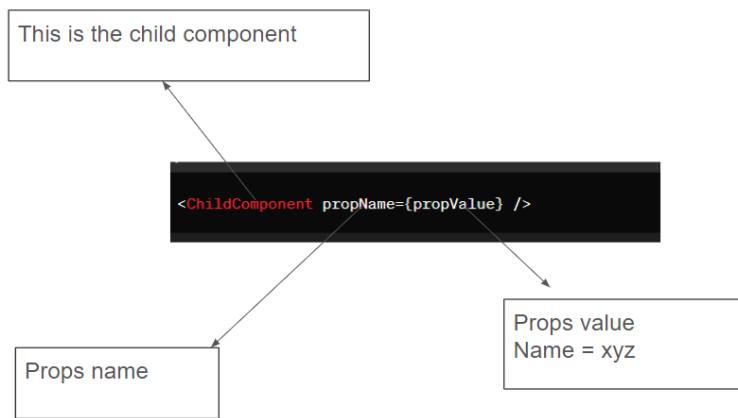
const Header = () => {
  return (
    <header>
      <ul>
        <li><a href="#">Home</a></li>
        <li><a href="#">contact</a></li>
        <li><a href="#">people</a></li>
        <li><a href="#">Contact me</a></li>
      </ul>
    </header>
  )
}

export default Header
```

12.4 Props

- React, "props" (short for properties) are a way of passing data from parent components to child components.
- they are read-only and immutable, meaning that the child components cannot modify the props they receive.
- Props are used to customize and configure child components, allowing for dynamic and reusable UI elements.

Syntax



Program

```
💡 Click here to ask Blackbox to help you code faster
1 import React from 'react'
2
3 const UserName = (props) => {
4   return (
5     <div>
6       <h1>{props.name}</h1>
7       <h1>{props.mailid}</h1>
8       <h1>{props.passwords}</h1>
9     </div>
10  )
11}
12
13 export default UserName
```

```
💡 Click here to ask Blackbox to help you code faster
1 import React from 'react'
2 import UserName from './Components/UserName'
3
4 function App() {
5   return (
6     <div>
7       |<UserName name="anuj" mailid = "Xyz@gmail.com" password = "12345" />
8     </div>
9   )
10 }
11
12 export default App
```

CHAPTER 13 (week10)

13.1 Conditional Rendering

- React makes it possible to render different components on the screen based on certain conditions. This is called conditional rendering
- For example, you can show a message to the user if they haven't entered any data, or you can show a loading spinner while data is being fetched from a server. Conditional rendering is a powerful feature that allows you to create dynamic user interfaces that adapt to the user's actions and input.
- To implement conditional rendering in React, you can use JavaScript's conditional statements, such as if and ternary operators, inside the render method of a component. This way, you can check if a certain condition is true or false, and render a component accordingly.

Code

```
▼ Click here to ask Blackbox to help you code faster
import PropTypes from 'prop-types'

function Greeting(props){

    const welcomemessage = <h2 className="true">WELCOME {props.username}
                           </h2>

    const welcomemessage2 = <h3 className="false">please logged in </h3>

    return (props.isloggedIn ? welcomemessage : welcomemessage2);
}

Greeting.prototype = {
    isloggedIn:PropTypes.bool,
    username:PropTypes.string,
}
Greeting.defaultProps = [
    isloggedIn:false,
    username:"guest",
]
export default Greeting;
```

13.2 Rendering

- In React JS, the render method is a crucial part of class components. It is used to display the component on the user interface (UI) as HTML or JSX code.
- The render method returns a single parent element that contains all the other child elements that make up the component. This parent element can be a div, section, article, or any other HTML element.
- To display the component on the UI, you can use the ReactDOM.render() function, which takes two arguments: the HTML code returned by the render method, and an HTML element where the component should be inserted.

Code

```
💡 Click here to ask Blackbox to help you code faster
import React, { useState } from 'react';

const List = () => {
  const [fruits, setFruits] = useState([
    { id: 1, name: "apple", calories: 95 },
    { id: 2, name: "orange", calories: 45 },
    { id: 3, name: "banana", calories: 105 },
    { id: 4, name: "coconut", calories: 159 },
    { id: 5, name: "pineapple", calories: 37 },
  ]);

  const listItems = fruits.map(fruit => (
    <li key={fruit.id}>
      {fruit.name}: &nbsp;
      <b>{fruit.calories}</b>
    </li>
  ));

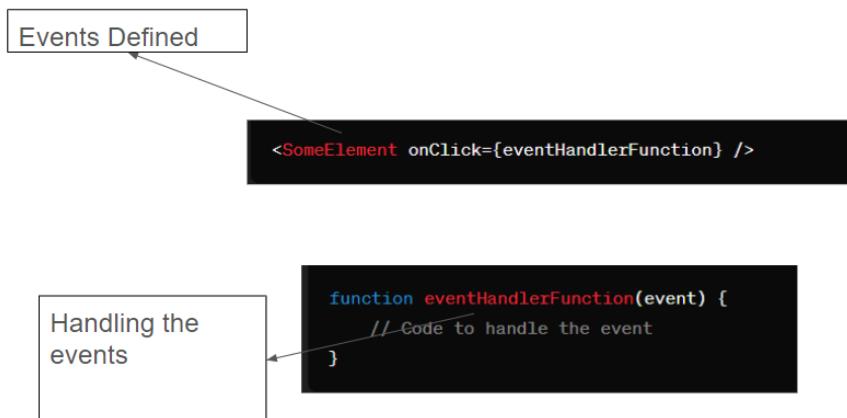
  return <ol>{listItems}</ol>;
}

export default List;
```

13.3 events

- In React, an "event" is when something happens on the user interface, like clicking a button or submitting a form. React supports many of the same events as HTML, and you can use them in a similar way. However, instead of using HTML attributes to attach event listeners,
- in React you use JavaScript. To do this, you add an event listener function to the JSX element using the "on" prefix, like "onClick" for a click event or "onSubmit" for a form submit event.

Syntax



Code

```
Check here to ask Blackbox to help you code faster
import React from 'react';

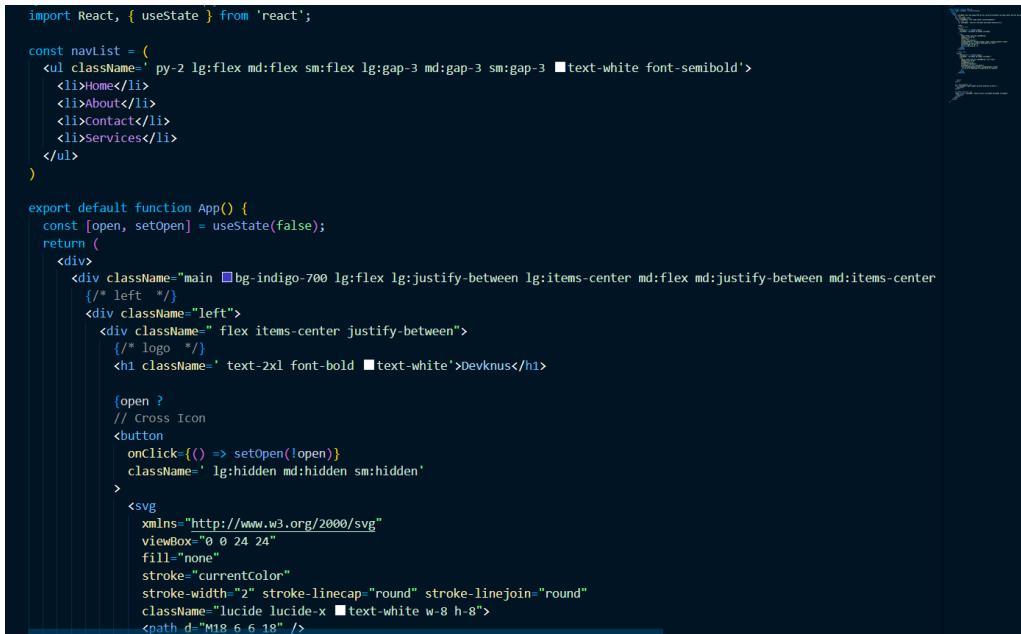
class MyButton extends React.Component {
  constructor(props) {
    super(props);
    this.handleClick = this.handleClick.bind(this);
  }

  handleClick() {
    console.log('Button clicked!');
  }

  render() {
    return <button onClick={this.handleClick}>Click me</button>;
  }
}
```

13.4 Understanding About Tailwind Css

- Tailwind CSS is a tool for quickly building user interfaces (UI) with custom styles. It's a "utility-first" framework, which means it provides a lot of small, reusable CSS classes that you can use to style your HTML elements.
- With Tailwind CSS, you don't have to write your own CSS code. Instead, you can use the pre-built classes to style your elements directly in your HTML. For example, you can use the "text-red-500" class to make some text red, or the "bg-gray-200" class to make a background gray.
- You can change the colors, fonts, and other settings to match your brand or design. This makes it a great choice for building custom UIs quickly and efficiently. Overall, Tailwind CSS is a powerful tool for building UIs with inline styling. It's a low-level framework that gives you all the building blocks you need to create a unique and modern interface, without having to write a lot of custom CSS code.



A screenshot of a code editor displaying a React component named `App()`. The component uses Tailwind CSS utility classes for styling. The code includes a navigation list with items for Home, About, Contact, and Services. It also features a main container with a logo and a title `Devknus`. A cross icon is present for closing the menu. The code uses `useState` to manage the open state of the menu.

```
import React, { useState } from 'react';

const navList = (
  <ul className=' py-2 lg:flex md:flex sm:flex lg:gap-3 md:gap-3 sm:gap-3 text-white font-semibold'>
    <li>Home</li>
    <li>About</li>
    <li>Contact</li>
    <li>Services</li>
  </ul>
)

export default function App() {
  const [open, setOpen] = useState(false);
  return (
    <div>
      <div className="main bg-indigo-700 lg:flex lg:justify-between lg:items-center md:flex md:justify-between md:items-center
        /* left */>
        <div className="left">
          <div className=" flex items-center justify-between">
            {/* logo */}
            <h1 className=' text-2xl font-bold text-white'>Devknus</h1>
          </div>
          {open ?
            // Cross Icon
            <button
              onClick={() => setOpen(!open)}
              className=' lg:hidden md:hidden sm:hidden
                /* */>
              <svg
                xmlns="http://www.w3.org/2000/svg"
                viewBox="0 0 24 24"
                fill="none"
                stroke="currentColor"
                stroke-width="2" stroke-linecap="round" stroke-linejoin="round"
                className="lucide lucide-x text-white w-8 h-8">
                <path d="M18 6 6 18" />
              </svg>
            </button>
          }
        </div>
      </div>
    </div>
  )
}
```

CHAPTER 14 (week11)

14.1 States and hooks

- In React.js, "state" is the data that describes the current condition of a component. Components in React.js can have state, which means they can store and manage their own data. State is mutable, which means it can change over time.
- This usually happens because of user interactions, network responses, or other events. When state changes, React.js automatically updates the component to reflect the new data. Before React.js version 16.8,
- only class components could have state. But with the introduction of the useState hook, you can now add state to functional components as well. The useState hook allows you to declare state variables in your functional components. For example, you can declare a state variable called count and set its initial value to 0. Then, you can use the setState function to update the count variable whenever the user clicks a button.

Syntax

```
Importing the use-state
import React, { useState } from 'react';

function MyComponent() {
  // Syntax for useState hook
  const [stateVariable, setStateFunction] = useState(initialValue);

  // Example:
  const [count, setCount] = useState(0); // Initializes count state with init

  // You can use stateVariable and setStateFunction to manage state
}

Defining the state variable and
setState
Intializing the state
```

Code

```
▼ Click here to ask Blackbox to help you code faster
import React, { useState } from 'react'

function App() {
  const [count, setCount] = useState(0)
  return (
    <div>
      <h1>this is {count}</h1>
      <button onClick={()=>{setCount(count+1)}}>update the count</button>
    </div>
  )
}
export default App;
```

14.2 UseEffect

- useEffect is a special function in React that helps you connect your component to things outside of React, like a database or a web API. It lets you run some code after the component has rendered, and you can choose when to run it again based on certain conditions.
- useEffect takes two arguments: a function to run, and an array of things to watch. The function runs after every render, but if you include an array of dependencies, it will only run again if one of those things changes
- . This is useful for things like fetching data from a server or updating the local storage. Speaking of local storage, React has a similar feature called useLocalStorage, which works just like localStorage but is integrated with React. It lets you store data in the browser's local storage, which persists even after the user closes the browser. This is different from sessionStorage, which only lasts for the current session.

Code

```
import { useState, useEffect } from "react";
import ReactDOM from "react-dom/client";

function Counter() {
  const [count, setCount] = useState(0);
  const [calculation, setCalculation] = useState(0);

  useEffect(() => {
    setCalculation(() => count * 2);
  }, [count]); // <- add the count variable here

  return (
    <>
      <p>Count: {count}</p>
      <button onClick={() => setCount((c) => c + 1)}>+</button>
      <p>Calculation: {calculation}</p>
    </>
  );
}

const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(<Counter />);
```

Output

Count: 4
+
Calculation: 8

14.3 working in the Nav bar



```
Navbar.jsx
src > components > Navbar > Navbar.jsx > Menu
    Click Here to ask BlackBox to help you code faster
1 import React from "react";
2 import Logo from "../../assets/food-logo.png";
3 import { FaCartShopping } from "react-icons/fa6";
4 import DarkMode from "./DarkMode";
5
6 const Menu = [
7   {
8     id: 1,
9     name: "Home",
10    link: "#",
11  },
12  {
13    id: 2,
14    name: "Services",
15    link: "#services",
16  },
17  [
18    {
19      id: 3,
20      name: "About",
21      link: "#about",
22    },
23  ];
24 const Navbar = () => {
25   return (
26     <>
27       <div className="shadow-md bg-white dark:bg-gray-900 dark:text-white duration-200">
28         <div className="container py-3 sm:py-0">
29           <div className="flex justify-between items-center">
30             <div>
31               <a href="#" className="font-bold text-2xl sm:text-3xl flex gap-2">
32                 <img src={Logo} alt="Logo" className="w-10" />
33                 Foodie
34               </a>
35             </div>
36             <div className="flex justify-between items-center gap-4">
37               <div>
```



14.4 working on the Dark mode

- Learning how to make darkmode in my website

```
<>
  <div className="relative ">
    <img
      // src={theme === "dark" ? darkPng : lightPng}
      src={lightPng}
      alt="dark"
      onClick={() =>
        setTheme((data) => (data === "dark" ? "light" : "dark"))
      }
      className={`w-12 cursor-pointer drop-shadow-[1px_1px_1px_rgba(0,0,0,0.1)] transition-all duration-300 absolute top-0 left-0`}
      style={{ opacity: theme === "dark" ? "0" : "100%" }}
    >
    <img
      src={darkPng}
      alt="dark"
      onClick={() =>
        setTheme((data) => (data === "dark" ? "light" : "dark"))
      }
      className="w-12 cursor-pointer drop-shadow-[1px_1px_2px_rgba(0,0,0,0.5)] duration-300 absolute top-0 right-0"
    />
  </div>
</>
);
```



CHAPTER 15 (week12)

15.1 use ref

- In React, you can use "refs" to access and manipulate DOM elements or React components directly.
- This is useful when you need to interact with a specific element, like focusing an input field or triggering an animation. There are two ways to create a ref in React: using `React.createRef()` or the `useRef()` hook with a DOM element:

Syntax

The diagram illustrates the syntax of the `useRef` hook. It shows a code snippet within a central box, with three callout boxes pointing to specific parts of the code:

- A box on the left labeled "Creating a ref using the useRef Hook" points to the line `const myRef = useRef(null);`.
- A box at the top labeled "Using the import we can import useRef" points to the import statement `import { useRef } from 'react';`.
- A box on the right labeled "Focusing on the input element" points to the line `myRef.current.focus();`, which is part of the `handleClick` function.

```
import React, { useRef } from 'react';

function MyComponent() {
  // Create a ref using the useRef hook
  const myRef = useRef(null);

  // Access the ref within the component
  const handleClick = () => {
    myRef.current.focus(); // For example, focusing on an input element
  };
}
```

Code

```
import { useState, useEffect, useRef } from "react";
import ReactDOM from "react-dom/client";

function App() {
  const [inputValue, setInputValue] = useState("");
  const count = useRef(0);

  useEffect(() => {
    count.current = count.current + 1;
  });

  return (
    <>
      <input
        type="text"
        value={inputValue}
        onChange={(e) => setInputValue(e.target.value)}
      />
      <h1>Render Count: {count.current}</h1>
    </>
  );
}

const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(<App />);
```

Output

Render Count: 13

15.2 handling the events in react

- In React, when you want to respond to user interactions like clicks or keyboard input, you use "event handlers".
- These are functions that you define in your React component, and then attach to specific elements in your JSX code. React provides its own set of "synthetic" event listeners, which work just like regular DOM events, but with some added benefits.
- For example, synthetic events are cross-browser compatible, and they only trigger one event instead of multiple events for the same interaction

Syntax

We can handle the events with function

```
import React from 'react';

class MyComponent extends React.Component {
  // Define event handler methods
  handleClick = () => {
    console.log('Button clicked!');
  };

  handleChange = (event) => {
    console.log('Input value changed:', event.target.value);
  };
}
```

Code

```
import React from 'react';

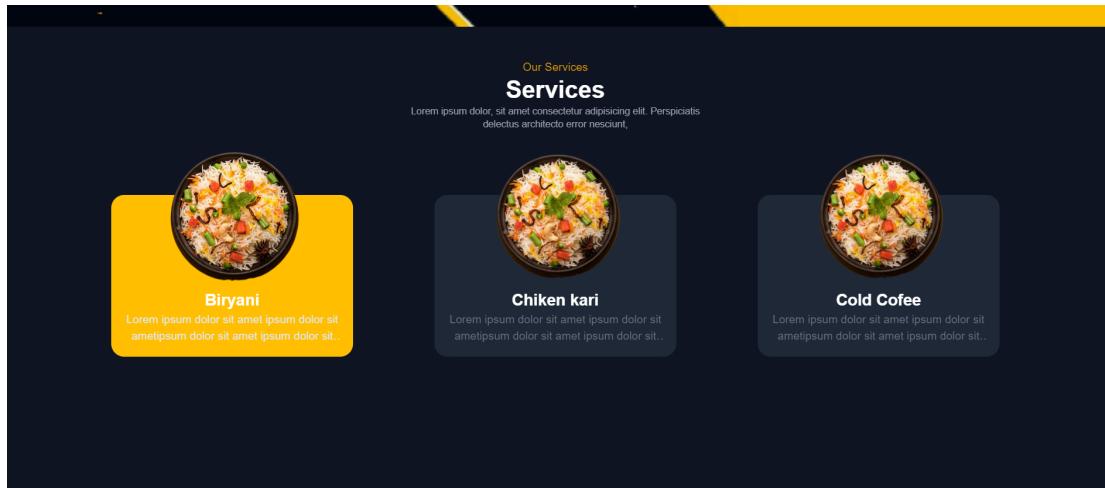
function Button() {
  const handleClick = () => {
    console.log('Button clicked');
  }

  return (
    <button onClick={handleClick}>Click me</button>
  );
}
```

15.3 Working on the hero-section of Foodi ui



15.4 Working on the Services section of Foodi ui

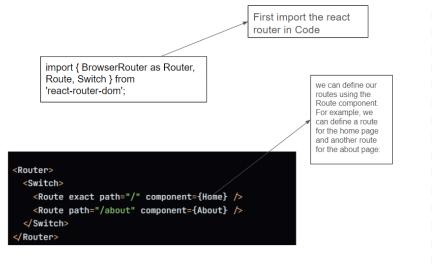


CHAPTER 16 (week13)

16.1 React Router

- React Router is a tool that helps you navigate between different pages or views in a React application. It lets you define different routes for your app, and display different components based on the current URL.
- For example, you might have a route for the homepage, another route for a list of products, and a third route for a detailed view of a single product. When the user clicks a link or enters a URL, React Router figures out which component to display based on the current URL.
- To use React Router, you first need to install it as a separate library. Then, you can define your routes using the `<Route>` component. Each route specifies a path and a component to render when the path matches the current URL.

Syntax



Code

```
import ReactDOM from "react-dom/client";
import { BrowserRouter, Routes, Route } from "react-router-dom";
import Layout from "./pages/Layout";
import Home from "./pages/Home";
import Blogs from "./pages/Blogs";
import Contact from "./pages/Contact";
import NoPage from "./pages/NoPage";

export default function App() {
  return (
    <BrowserRouter>
      <Routes>
        <Route path="/" element={<Layout />}>
          <Route path="blogs" element={<Blogs />} />
          <Route path="contact" element={<Contact />} />
          <Route path="*" element={<NoPage />} />
        </Routes>
      </BrowserRouter>
    );
}
```

Output

[Home](#)
[Blogs](#)
[Contact](#)

Blog Articles

16.2 Context-hook

- The React Context API is a way to share data between different components in a React application, without having to pass props down manually through every level of the component tree. This is useful when you have data that needs to be accessed by multiple components, but you don't want to pass it down through every level of the component hierarchy.
- To use the Context API, you first create a context object using the `React.createContext()` method. Then, you define a provider component that wraps the components that need access to the shared data. The provider component has a value prop that holds the shared data.

Syntax

```
import React, { useContext } from 'react';
import { MyContext } from './MyContext';

function MyComponent() {
  const contextValue = useContext(MyContext);

  // Use the context value here
  return (
    <div>
      {contextValue.someValue}
    </div>
  );
}
```

we import the user Context hook and the Context object from the MyContext module.

We then use the `useContext` hook to consume the context value by passing the `MyContext` object as an argument

Example

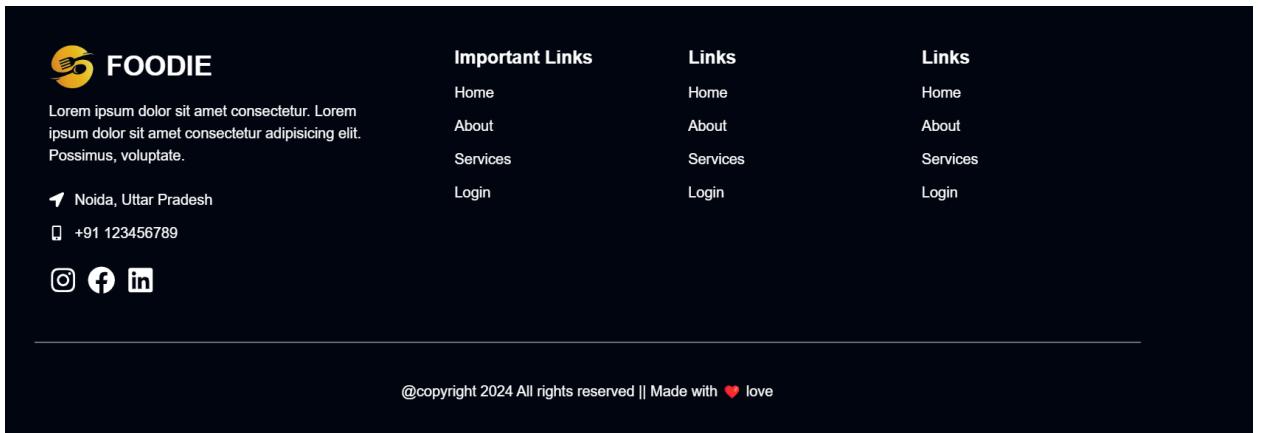
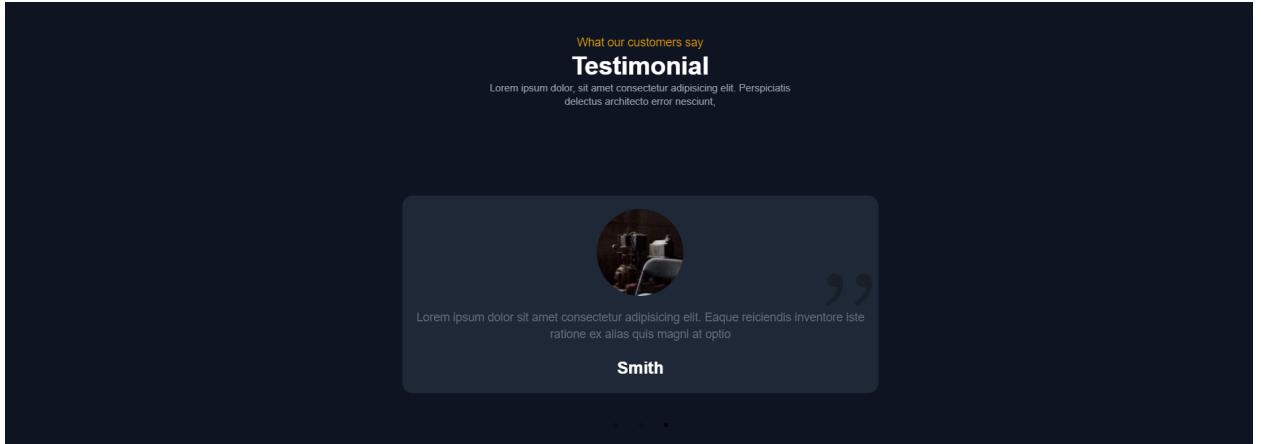
```
import React, { useContext } from "react";
import { TodoListContext, Provider } from "./TodoListContext";

// AddTodo Component with Input field and Add Button
const AddTodo = () => {
  const [inputValue, setInputValue] = React.useState("");
  const { addTodoItem } = useContext(TodoListContext);

  return (
    <>
      <input
        type="text"
        value={inputValue}
        placeholder="Type and add todo item"
        onChange={(e) => setInputValue(e.target.value)}
      />
      <button
        onClick={() => {
          addTodoItem(inputValue);
          setInputValue("");
        }}
      > Add </button>
    </>
  );
};

// Todolist component to show the list
const Todolist = () => (
  <ul>
    {todoList.map((item) => (
      <li>{item}</li>
    ))}
  </ul>
);
```

16.3 Working on the Feedback and footer-section of food ui (wrapping up the project)



CHAPTER 17 (week14)

17.1 Use-Hooks

- Hooks are a way to use state and other features in React without having to write a class. They were added in React version 16.8. One of the most commonly used hooks is the useState hook. This hook lets you add state to a functional component. It takes an initial state value as an argument, and returns a pair:
 - the current state value, and a function that lets you update it. For example, let's say you want to create a counter component that starts at 0. You can use the useState hook to add state to the component, and update the state when the user clicks a button.

```
import React, { useState } from 'react';

function Example() {
  // Declare a new state variable, which we'll call "count"
  const [count, setCount] = useState(0);

  return (
    <div>
      <p>You clicked {count} times</p>
      <button onClick={() => setCount(count + 1)}>
        Click me
      </button>
    </div>
  );
}
```

17.2 useCallback hook

- The useCallback hook is a way to improve the performance of your React application by preventing unnecessary re-renders of child components.
- It works by "memoizing" a function, which means that it only creates a new version of the function when its dependencies change.

Example

```
import { useCallback } from 'react';

function Component({ todos, addTodo }) {
  const handleAddTodo = useCallback((text) => {
    addTodo(text);
  }, [addTodo]);

  return (
    <div>
      <input type="text" onKeyDown={(e) => {
        if (e.key === 'Enter') {
          handleAddTodo(e.target.value);
          e.target.value = '';
        }
      }} />
      <ul>
        {todos.map((todo, index) => (
          <li key={index}>{todo}</li>
        )));
      </ul>
    </div>
  );
}

function App() {
  const [todos, setTodos] = useState([]);

  const addTodo = useCallback((text) => {
    setTodos((prevTodos) => [...prevTodos, text]);
  }, []);

  return (
    <Component todos={todos} addTodo={addTodo} />
  );
}
```

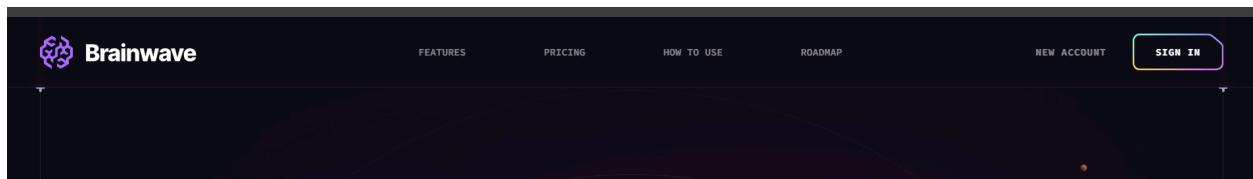
17.3 Start working on the new project (admin panel) (discussion)

Technology = Javascript , react js , material ui ,barchar.js , html , Tailwind css

Tools = vs code , Free- peka , font- awesome

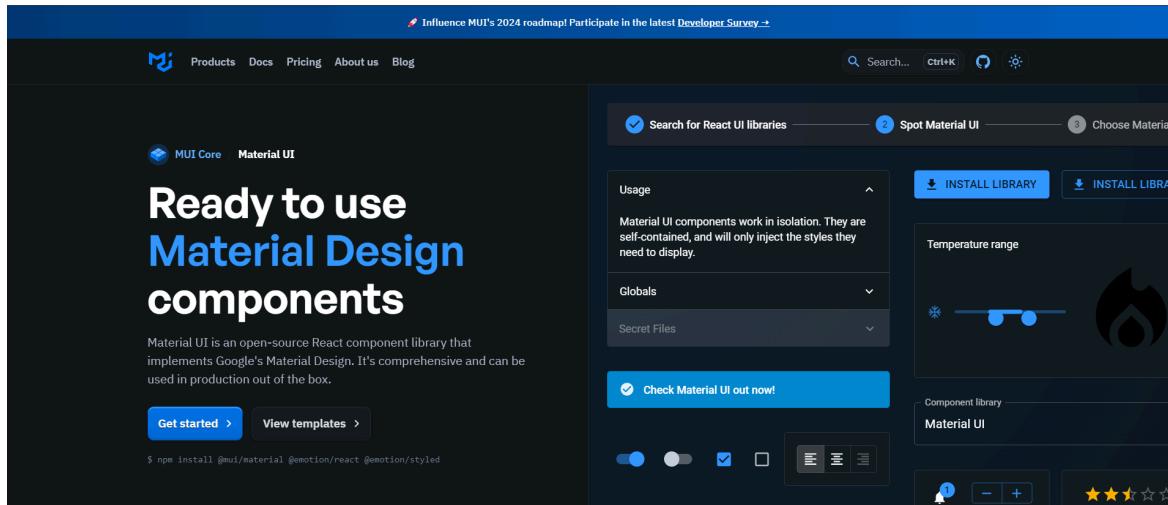
CHAPTER 18 (week15)

18.1 Navbar

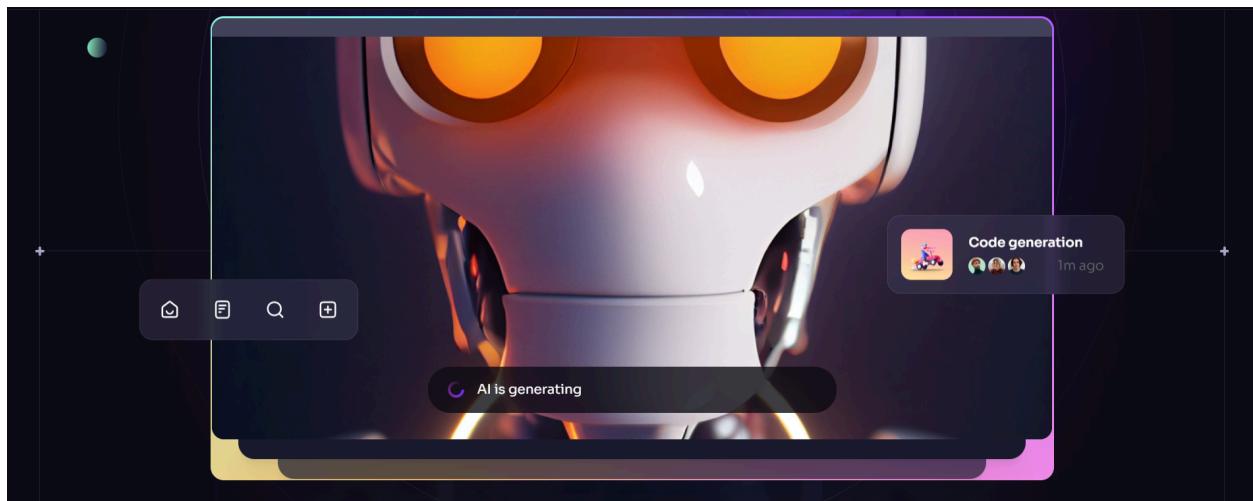


18.2 Material - ui

- Material User Interface (MUI) is an open-source React component library that implements Google's Material Design. It offers a comprehensive collection of prebuilt components that are ready for use in production right out of the box. MUI supports Material Design 2, and the adoption of Material Design 3 is tentatively planned for MIUI v6.
- MUI is known for its ease of use and customization options, making it a popular choice among developers. It can be installed into your application using package managers like yarn or npm. Some of the reasons why developers prefer MUI include its compatibility with popular tools like Node.js, React, Next.js, and Emotion, and its ability to optimize the design process.



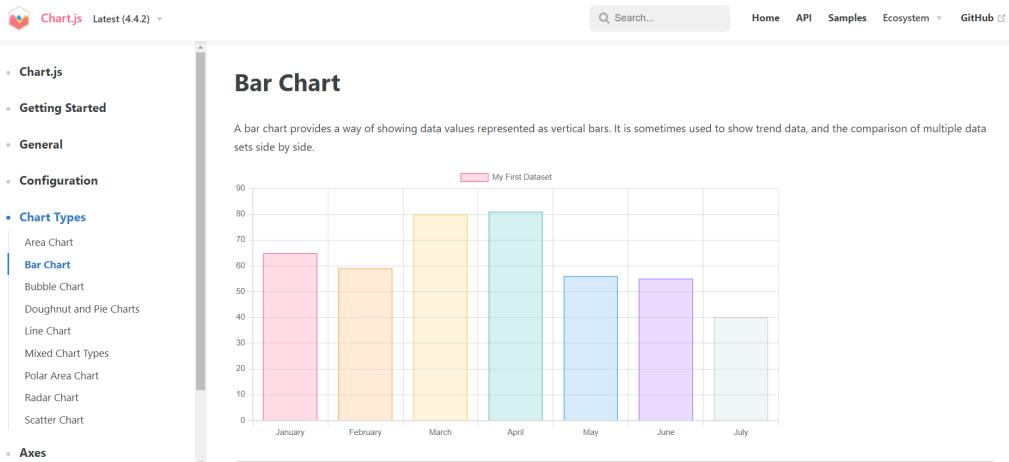
18.3 Hero-section



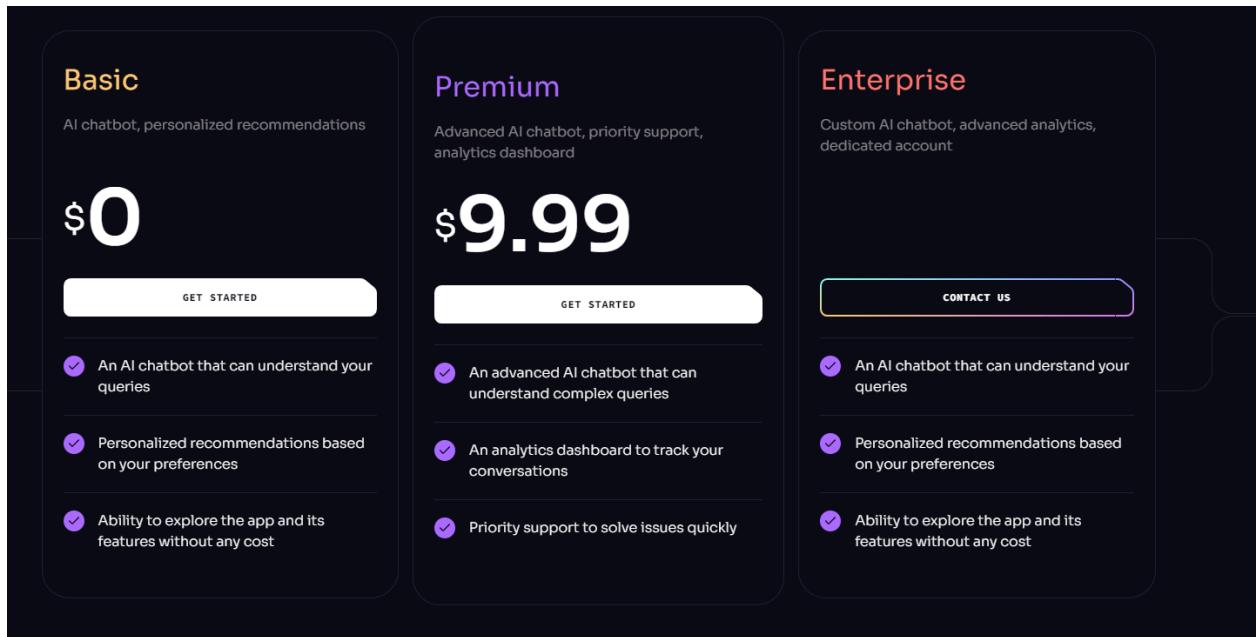
CHAPTER 19 (week16)

19.1 Understanding The Barchart.js

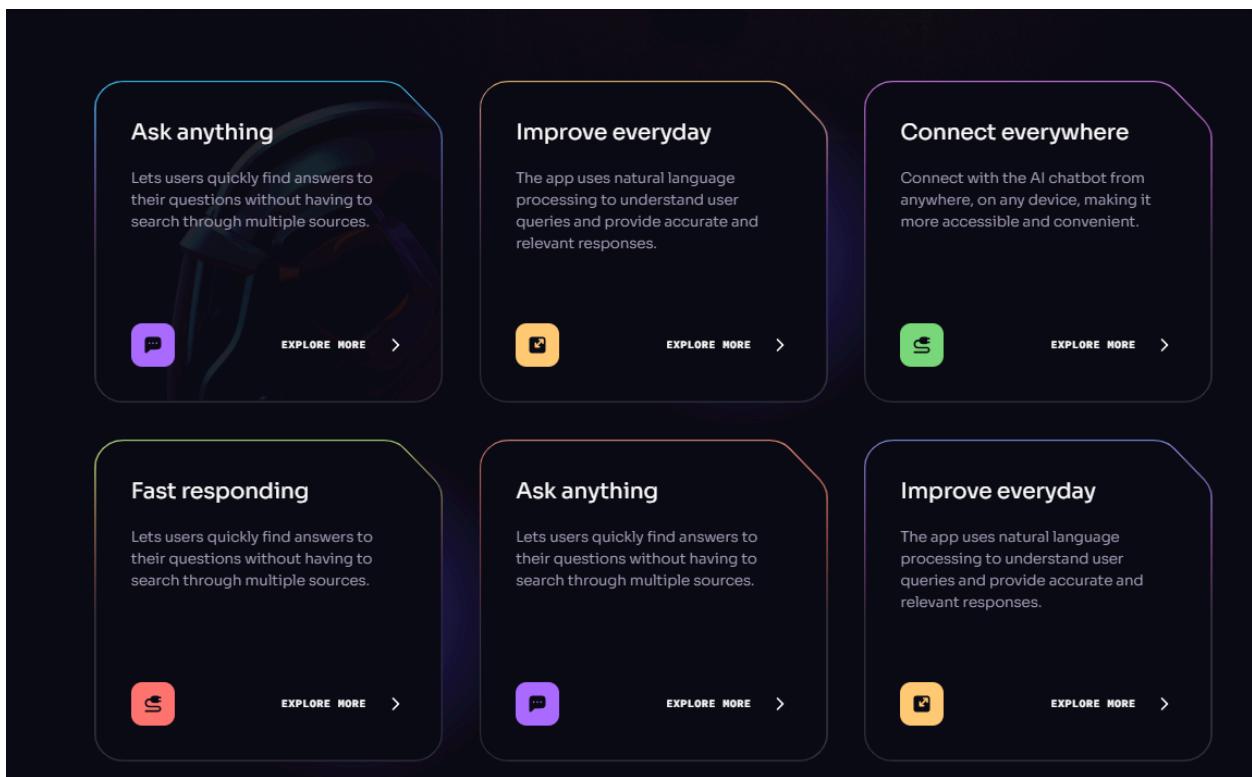
- Bar Chart JS is a JavaScript-based method for creating bar charts. Picturing information with even rectangular bars can be utilized.
- The value that each bar represents is inversely proportional to its length. By altering the properties of the data and options, you can further customize the chart. You can, for instance, alter the axis labels, add a title to the chart, and change the colors of the bars.



19.2 Working On the Pricing-section

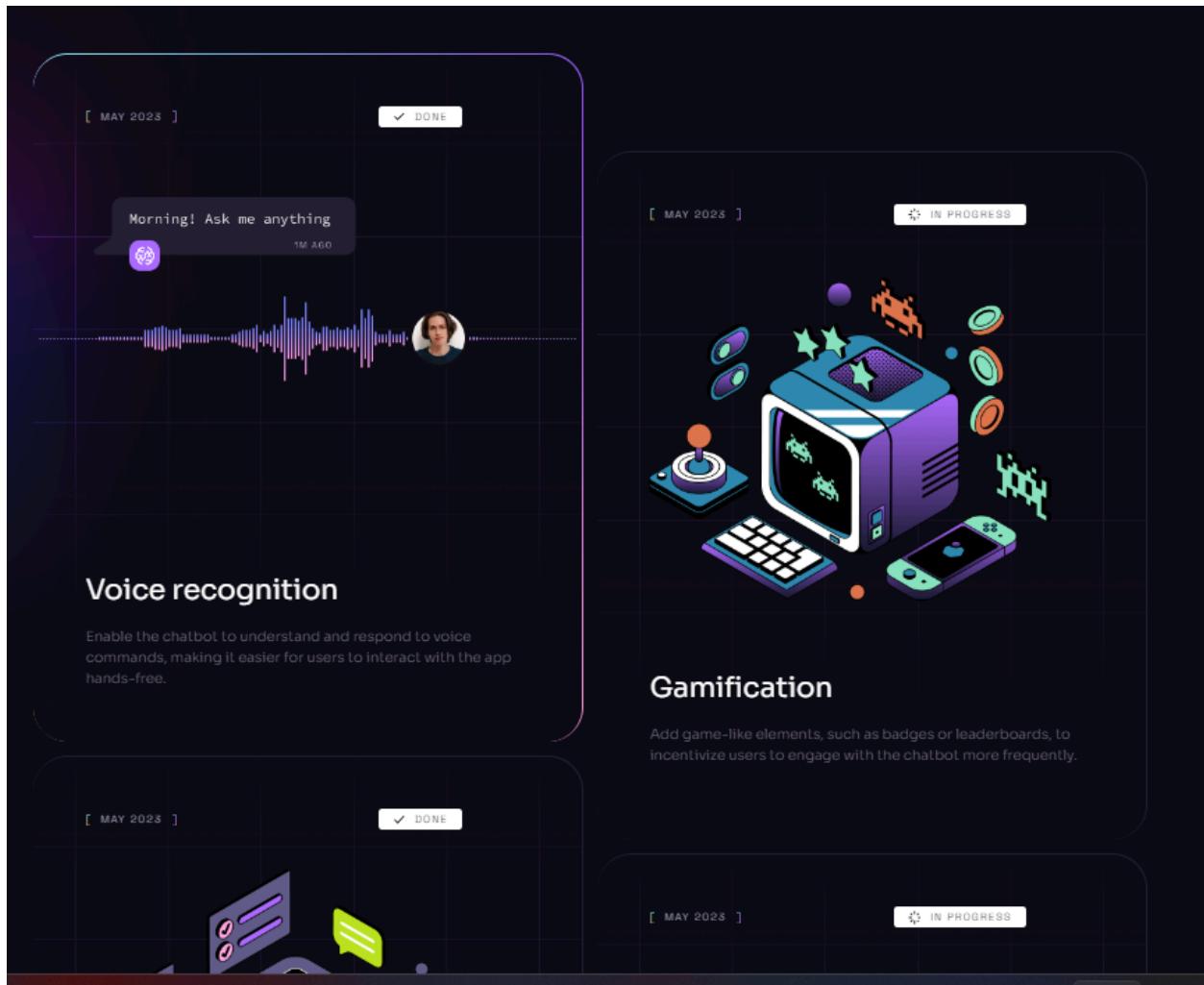


19.3 Working On the Feature-section



CHAPTER 20 (week17)

20.1 Working On the Footer Section



20.2 Working on the Collaboration-section

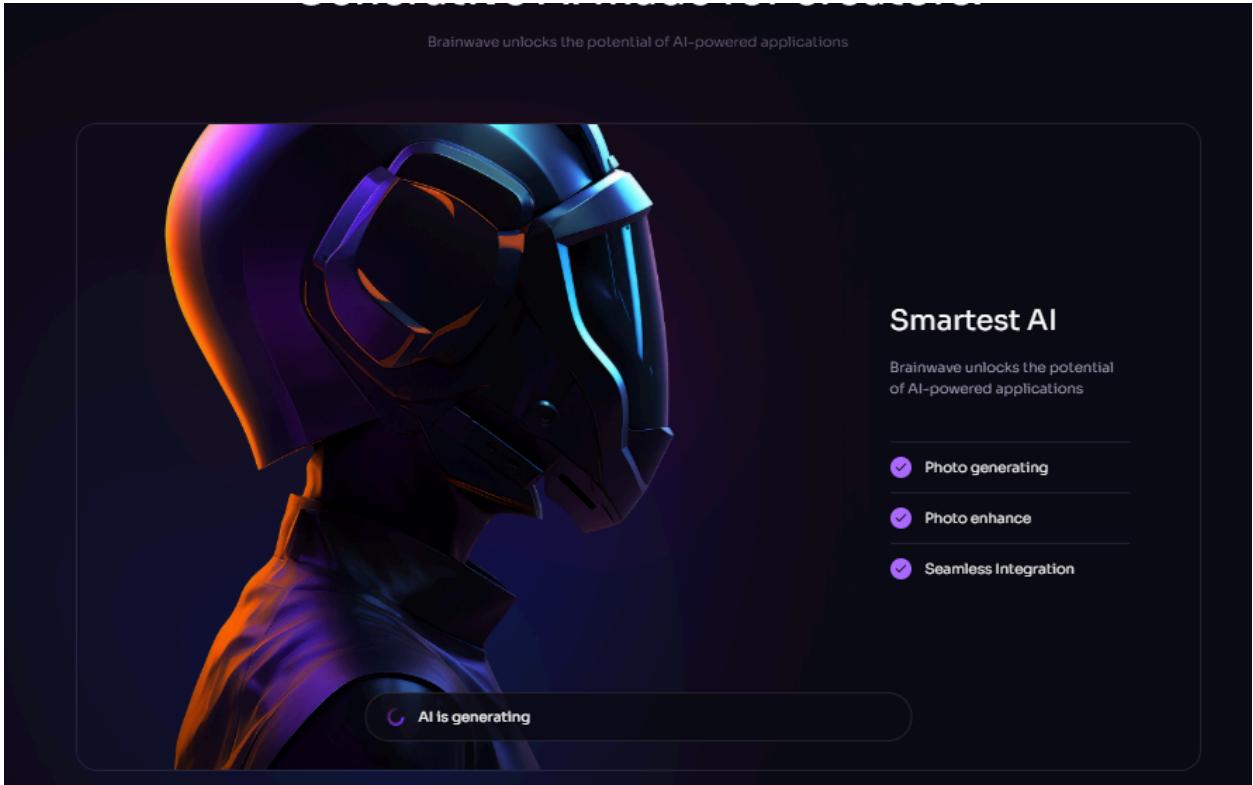
AI Chat App for seamless collaboration

- Seamless Integration**
With smart automation and top-notch security, it's the perfect solution for teams looking to work smarter.
- Smart Automation**
- Top-notch Security**

[TRY IT NOW](#)

With smart automation and top-notch security, it's the perfect solution for teams looking to work smarter.

20.3 Working on the How-to use -section



Conclusion

In conclusion, this internship experience has provided valuable insights into the world of React.js development and its application in modern web development projects. Throughout the internship, various aspects of React.js were explored, including component-based architecture, state management, routing, and handling of asynchronous operations.

The hands-on experience gained through working on real-world projects has been instrumental in solidifying theoretical knowledge and honing practical skills. From building interactive user interfaces to optimizing performance and maintaining code quality, each task presented unique challenges and learning opportunities.

Reference

<https://www.w3schools.com/js/DEFAULT.asp>

[JavaScript | MDN \(mozilla.org\)](#)

<https://tailwindcss.com/docs/installation>

<https://react.dev/learn/passing-props-to-a-component>

<https://www.chartjs.org/docs/latest/charts/bar.html>

<https://mui.com/material-ui/>