1. Weather Clothing Adviser :

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Weather Clothing Adviser</title>

</head>

<body>

<h1>Weather Clothing Adviser</h1>

<label for="temperature">Enter the current temperature (°C): </label>

<input type="number" id="temperature" placeholder="e.g., 25"><br><br>

<label for="raining">Is it raining? </label>

<select id="raining">

<option value="yes">Yes</option>

<option value="no">No</option>

</select><br><br>

<button onclick="getClothingAdvice()">Get Clothing Advice</button>

<p id="advice"></p>

<script>

function getClothingAdvice() {

const temp = document.getElementById('temperature').value;

const raining = document.getElementById('raining').value;

let advice = "";

if (temp === "") {

advice = "Please enter the temperature.";

} else {

const temperature = parseInt(temp);

if (temperature < 10) {

advice = "It's quite cold. Wear a coat, scarf, and gloves.";

} else if (temperature >= 10 && temperature <= 20) {

advice = "The weather is cool. Wear a jacket.";

} else if (temperature > 20) {

advice = "It's warm. Light clothing is fine.";

}

if (raining === "yes") {

advice += " Also, don't forget your umbrella or raincoat.";

}

}

document.getElementById('advice').textContent = advice;

}

</script>

</body>

</html>

1. Ticket Pricing :

// Function to determine ticket price based on age

function determineTicketPrice(age) {

if (age <= 12) {

return 10;

} else if (age >= 13 && age <= 17) {

return 15;

} else {

return 20;

}

}

// Prompt the user to enter their age

let age = parseInt(prompt("Enter your age:"));

// Determine the price based on the input age

let ticketPrice = determineTicketPrice(age);

// Output the ticket price

alert(`The ticket price is: $${ticketPrice}`);

Recursion :

1-Fibonacci Sequence :

function fibonacci(n) {

// Base cases

if (n === 0) {

return 0;

}

if (n === 1) {

return 1;

}

// Recursive case: sum of the two preceding numbers

return fibonacci(n - 1) + fibonacci(n - 2);

}

// Example usage

const n = 7; // Change this to any nth number you want to find

console.log(`Fibonacci number at position ${n} is:`, fibonacci(n));

2-Palindrome Checker:

function isPalindrome(str) {

// Normalize the string: remove non-alphanumeric characters and convert to lowercase

const cleanStr = str.toLowerCase().replace(/[^a-z0-9]/g, '');

// Helper function to check palindrome recursively

function checkPalindrome(left, right) {

// Base case: if the left index crosses the right index, it's a palindrome

if (left >= right) {

return true;

}

// If characters at current positions don't match, it's not a palindrome

if (cleanStr[left] !== cleanStr[right]) {

return false;

}

// Recursive case: check the next pair of characters

return checkPalindrome(left + 1, right - 1);

}

// Call the recursive function starting from both ends of the string

return checkPalindrome(0, cleanStr.length - 1);

}

// Test cases

console.log(isPalindrome("A man, a plan, a canal: Panama")); // true

console.log(isPalindrome("racecar")); // true

console.log(isPalindrome("hello")); // false