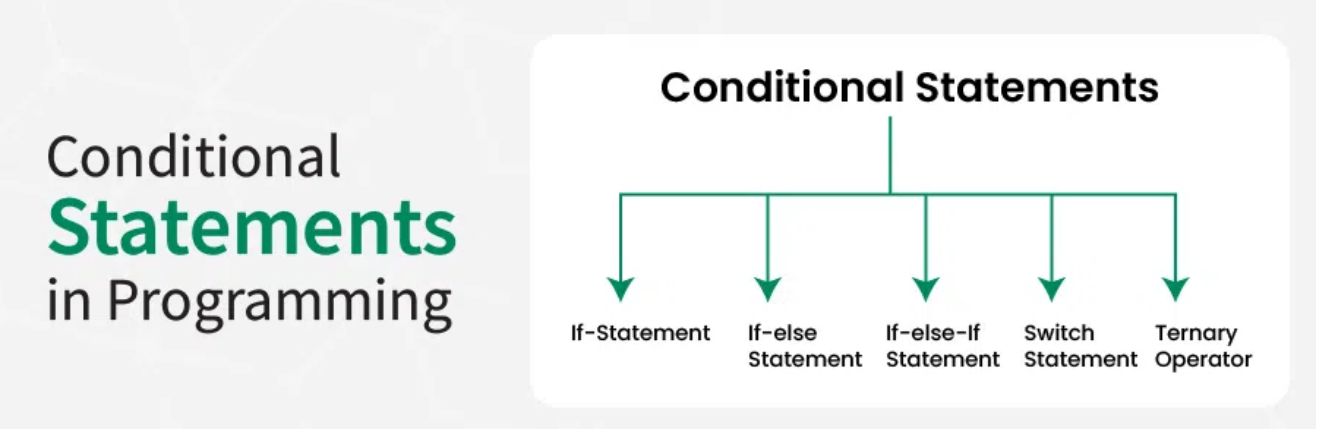
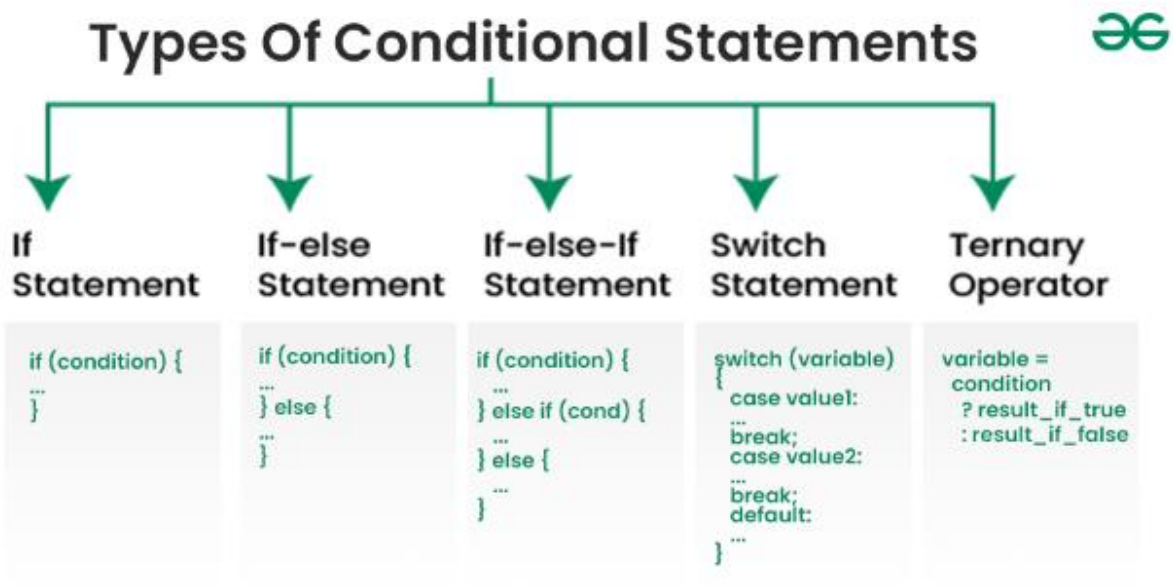
Conditional Statements

Conditional statements in programming are used to **control the flow of a program** based on certain conditions. These statements allow the execution of different code blocks depending on whether a specified condition evaluates to true or false, providing a fundamental mechanism for **decision-making** in algorithms. In this article, we will learn about the basics of Conditional Statements along with their different types.





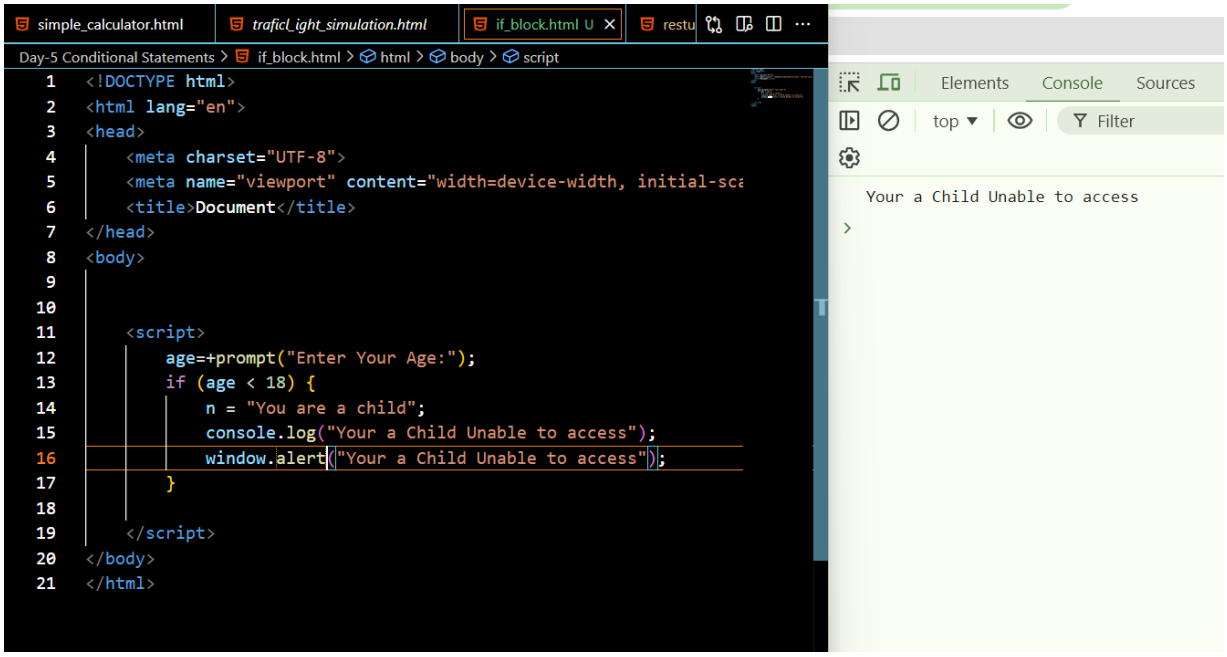
1. if Statement:

The **if** statement executes a block of code if a specified condition is true.

Syntax:

```
if (condition) {
    // Code to execute if condition is true
}
```

Example:



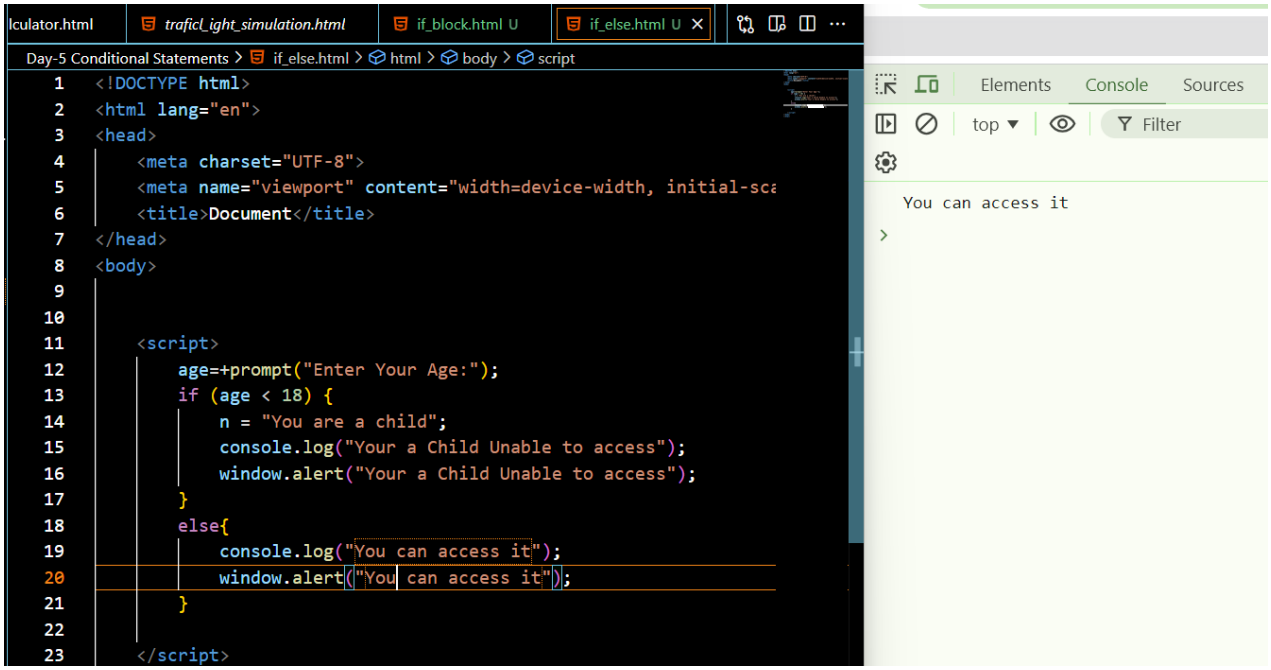
2. if...else Statement:

The **if...else** statement executes one block of code if a specified condition is true and another block if the condition is false.

Syntax:

```
if (condition) {
   // Code to execute if condition is true
} else {
   // Code to execute if condition is false
}
```

Example:



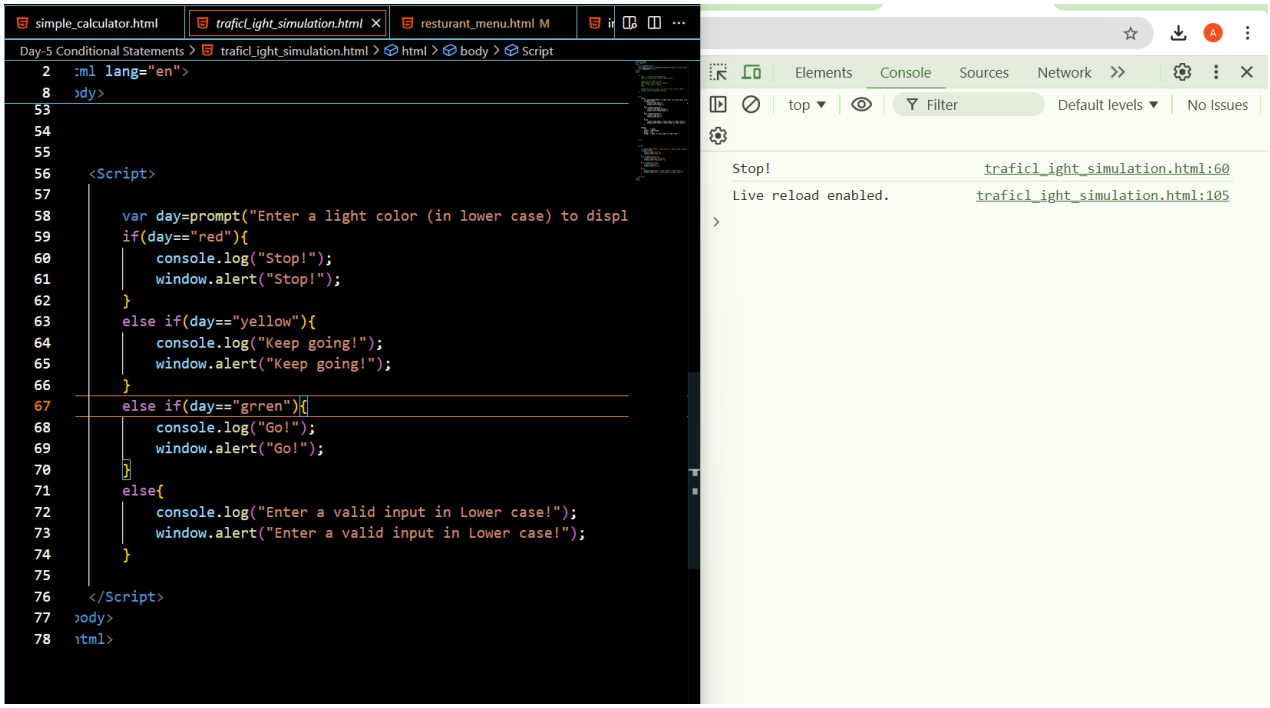
3)if...else if...else Statement:

The **if...else if...else** statement allows you to specify multiple conditions and execute different code blocks based on the outcome of those conditions.

Syntax:

```
if (condition1) {
   // Code to execute if condition1 is true
} else if (condition2) {
   // Code to execute if condition2 is true
} else {
   // Code to execute if none of the conditions are true
}
```

Example:



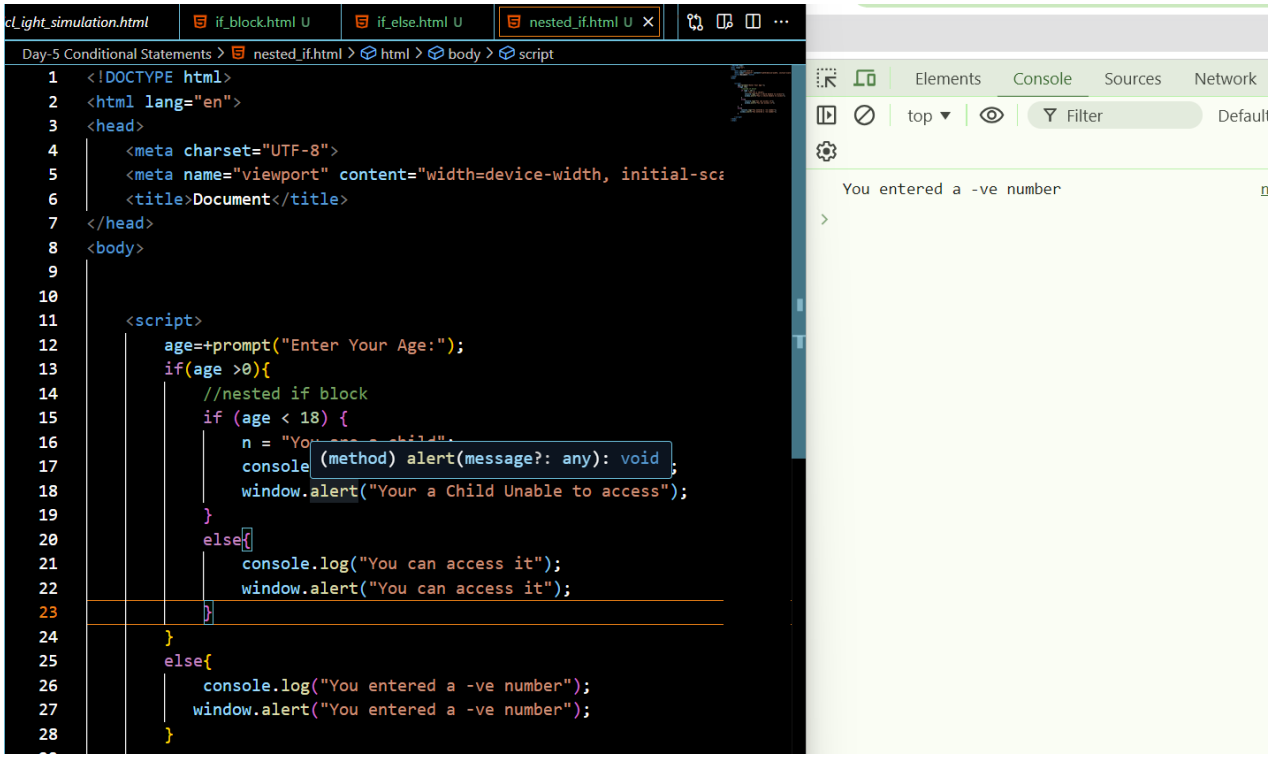
4)Nested if:

You can have if statements inside if statements, this is called a nested if.

Syntax

```
if condition1 {
  // code to be executed if condition1 is true
 if condition2 {
    // code to be executed if both condition1 and condition2 are true
 }
}
```

Example:



Switch statements

A switch statement in JavaScript is a control flow statement that allows you to execute a block of code among many options based on the value of an expression.

Key Points

1. **Expression Evaluation**: The **expression** inside the switch statement is evaluated once.

2. **Case Matching**: The result of the expression is compared with the values specified in each **case** clause using strict equality (**===**).

3. **Code Execution**: If a match is found, the code block associated with that **case** is executed.

4. **Break Statement**: The **break** statement is used to terminate the switch statement. If omitted, execution will continue to the next **case** clause (fall-through behavior).

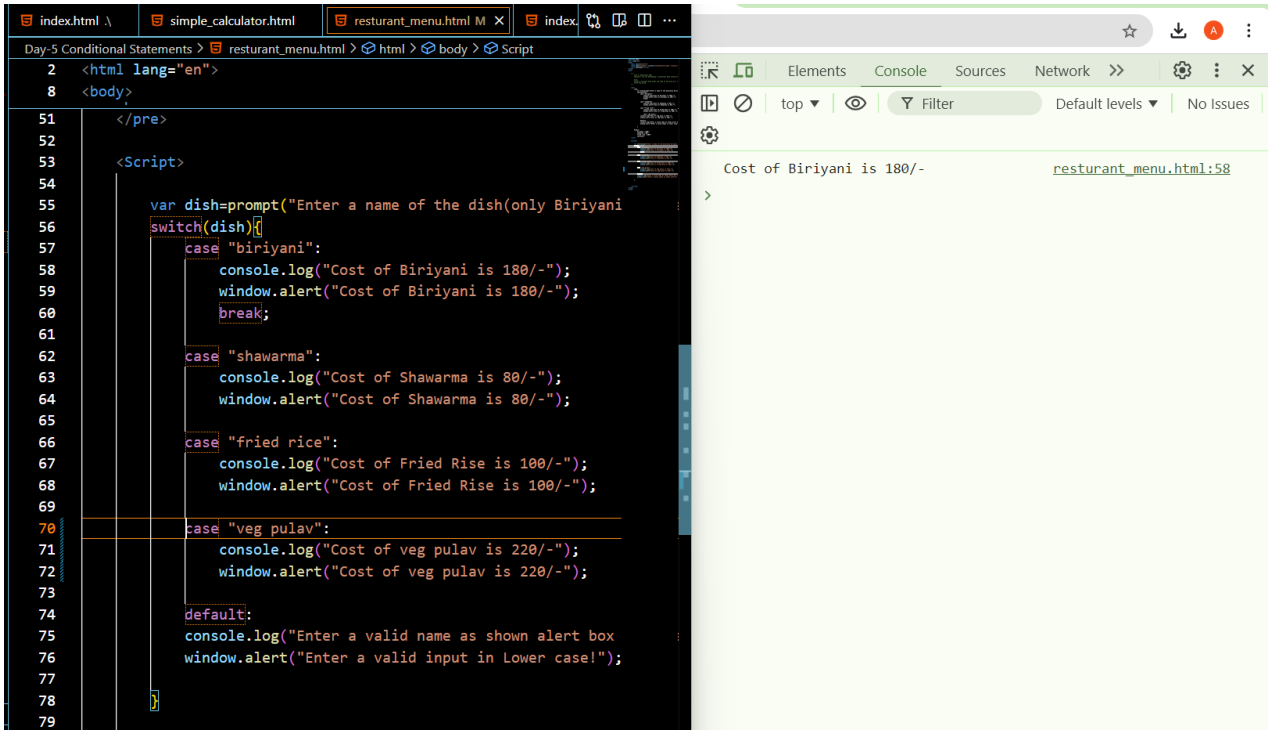
5. **Default Case**: The **default** clause is optional and executes if no matching **case** is found. It acts like the **else** in an if-else structure.

Syntax:

```
switch (expression) {
  case value1:
    // Code to run if expression === value1
    break;
  case value2:
    // Code to run if expression === value2
    break;
```

```
  // More cases...
  default:
    // Code to run if no case matches
}
```

Example:



TASKS

Task 1: Day of the Week Message

Scenario: Develop a webpage that displays a special message based on the current day of the week.

“Start your week strong!” for Monday.

“Keep going!” for Tuesday.

“Halfway there!” for Wednesday.

“Almost the weekend!” for Thursday.

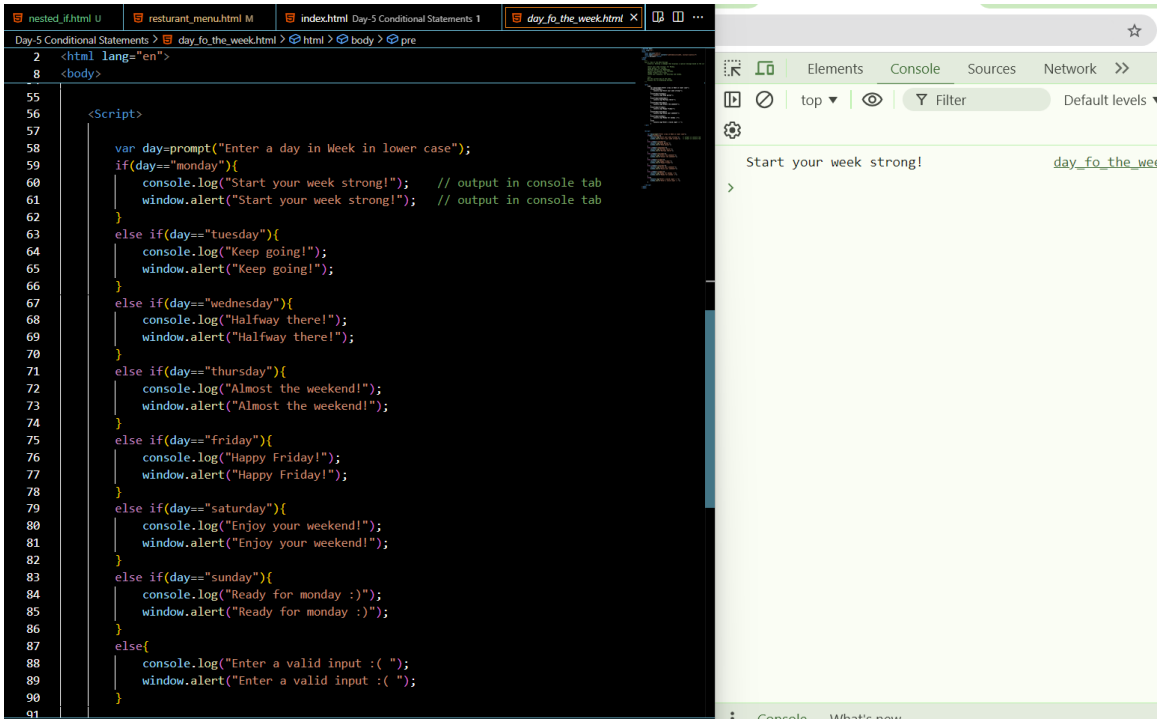
“Happy Friday!” for Friday.

“Enjoy your weekend!” for Saturday and Sunday.

Task:

Get the current day of the week.

Display the corresponding message.



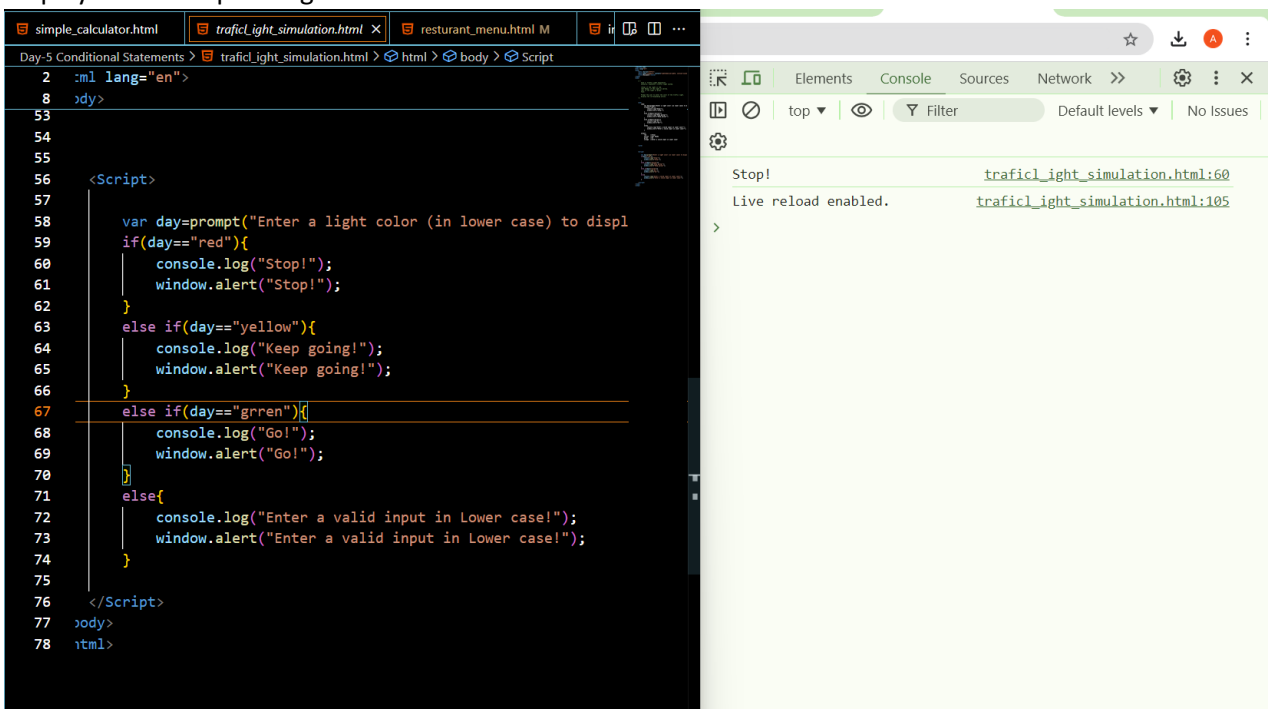
Task 2: Traffic Light Simulation

Scenario: Simulate a traffic light system.

“Stop” if the light is red.
“Get Ready” if the light is yellow.
“Go” if the light is green.

Task:

Prompt the user to enter the color of the traffic light.
Display the corresponding action.

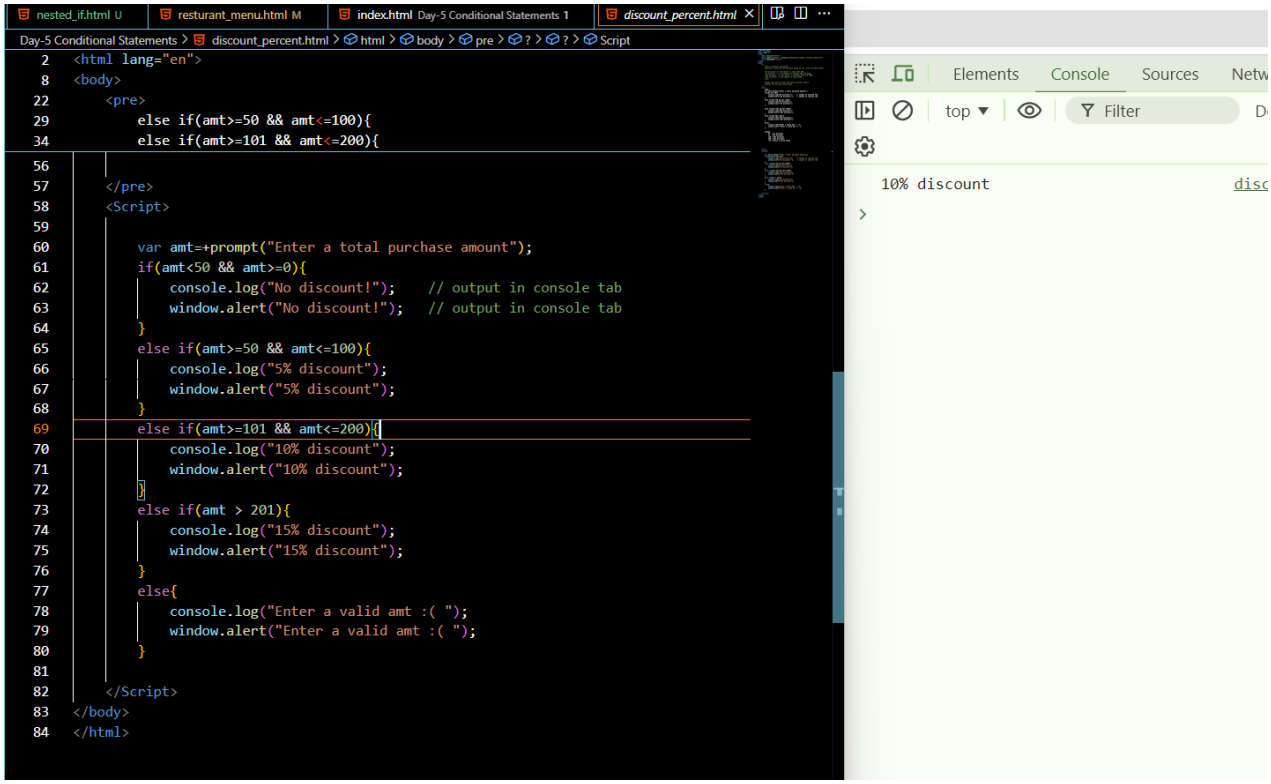


Task 3: Discount Calculator

Scenario: Calculate the discount based on the total purchase amount.

“No discount” if the amount is less than $50.
“5% discount” if the amount is between $50 and $100.
“10% discount” if the amount is between $101 and $200.
“15% discount” if the amount is above $200.

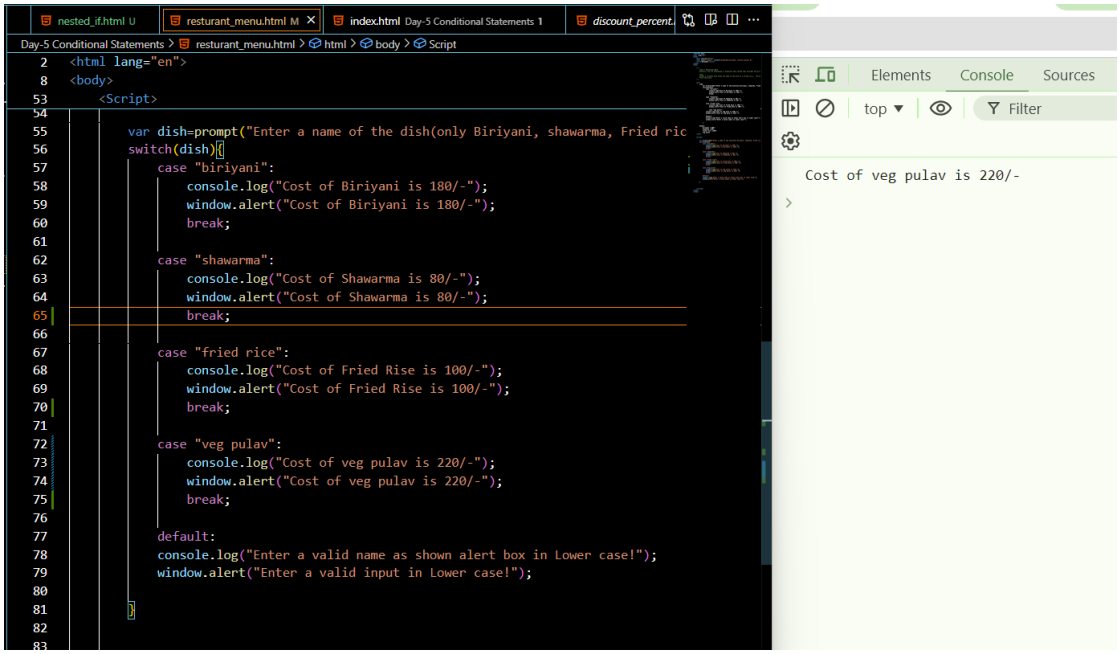
Task:
Prompt the user to enter the total purchase amount.
Display the discount percentage.



Task 4: Restaurant Menu

Scenario: You are developing a restaurant menu system that provides the price of a dish based on the dish name.

Task:
Assume a variable dish holds the name of the dish as a string (e.g., "Biriyani", "shawarma", "Fried rice", "veg pula").
Print the price.



Task 5: Simple Calculator

Scenario: You are developing a simple calculator that performs basic arithmetic operations.

Task:

Assume variables num1 and num2 hold two numbers, and operator holds the arithmetic operator as a string (e.g., "+").

Use a switch case statement to perform the operation and store the result in a variable result.

Print the result.