Internship Report – Day 11

Today, I learned and practiced important JavaScript concepts. I worked with the switch case statement, loops (for and while), if conditions, and different types of operators. These topics helped me understand how JavaScript works and how to write better programs. By practicing these concepts, I improved my coding skills and became more comfortable using JavaScript for problem-solving.

First, I learned about the switch case statement. This is useful when there are many possible choices, and we need to check one value against different cases. Instead of writing many if-else statements, the switch case makes the code easier to read and manage. For example, if I want to check the day of the week and print a message based on that, I can use a switch case instead of multiple if-else statements. The break statement is important because it stops execution after a case is matched. If none of the cases match, the default case runs. I wrote a small program that takes user input for a day and prints different messages. This helped me understand how switch cases work. I also learned that JavaScript switch cases use strict comparison (===), which means the value and type must match exactly.

Next, I worked with loops, which help in repeating a task multiple times. Instead of writing the same code again and again, loops make the program shorter and more efficient. I practiced using for loops when I knew how many times I needed to repeat something. The while loop was useful when I did not know the number of times beforehand and wanted to continue until a condition was met. I used the for loop to print numbers from 1 to 10, create patterns, and loop through arrays. The while loop helped me keep asking the user for input until they entered a correct value. At first, I made a mistake and created an infinite loop because I forgot to update the loop condition inside the while loop. This mistake helped me understand the importance of managing loop conditions properly. If a loop does not have a condition to stop, it runs forever and can crash the program. I also learned about nested loops, which means using a loop inside another loop. I practiced creating patterns using nested loops, such as printing stars in different shapes.

After loops, I focused on if conditions, which help programs make decisions. The if statement runs code only when a condition is true. If the condition is false, we can use else to run different

code. If there are multiple choices, we use else if. For example, I wrote a program to check if a number is positive, negative, or zero. I also practiced checking whether a person is eligible to vote based on their age. I also learned about logical operators like AND (&&), OR (||), and NOT (!). Using these operators, I was able to combine multiple conditions in a single if statement. This helped me write shorter and smarter code.

Finally, I learned about operators, which are symbols used to perform actions like calculations and comparisons. JavaScript has different types of operators. Arithmetic operators such as +, -, *, /, %, and ** are used for math calculations. Comparison operators such as ==, ===, !=, !==, >, <, >=, and <= are used to compare values. Logical operators like &&, ||, and ! help combine conditions. Assignment operators such as =, +=, -=, *=, /=, and %= are used to assign values to variables.

I practiced using these operators by writing small programs. One program checked if a number was even or odd using the modulus (%) operator. Another program used comparison operators to check if a person was old enough to drive. I also learned about strict equality (===) and loose equality (==) in JavaScript. The strict equality operator checks both value and type, while loose equality only checks the value. This is important to avoid unexpected errors in JavaScript programs.

Today's learning session was very useful. I understood how the switch case simplifies multiple conditions. I practiced different loops and learned how to avoid infinite loops. I improved my understanding of if conditions and logical operators. I explored operators and saw how they are used in real programs. I also learned that writing small programs is the best way to understand new concepts. The more I practice, the more confident I feel.

I will continue practicing JavaScript to strengthen my understanding. Some of the things I want to focus on next include writing functions to reuse code, understanding arrays and how to manipulate them, learning about objects to store and manage data, and exploring JavaScript events to make interactive web pages. By improving these skills, I will become better at writing JavaScript programs. I am excited to keep learning and applying these concepts in real projects.