

Module 4: Control Structures, Functions, and Data Structures

Practice Activity 4.1 Practice with Conditionals

Activity 1 – Solution

```
let temperature = 10;

if (temperature > 30) {
  console.log("It's a hot day!");
} else if (temperature >= 20 && temperature <= 30) {
  console.log("The weather is pleasant.");
} else {
  console.log("It's a bit chilly.");
}
```

The output of above code will be "It's a bit chilly."

- The first `if` condition, check if the temperature is greater than 30. If it is, print "It's a hot day!"
- In the `else if` condition, check if the temperature is greater than or equal to 20 and less than or equal to 30. If it is, print "The weather is pleasant."
- Lastly, if none of the conditions are true, print "It's a bit chilly."

Activity 2 – Solution

```
const year = 2024;

if (year % 4 === 0 && year % 100 !== 0) {
  // The year is divisible by 4 but not by 100
  console.log("It is a leap year.");
} else if (year % 400 === 0) {
  // The year is divisible by 400
  console.log("It is a leap year.");
} else {
  // The year does not meet any leap year conditions
  console.log("It is not a leap year.");
}
```

- The first `if` statement checks whether the year is divisible by 4 but not by 100. If this condition is true, it returns true as it satisfies the leap year condition.
- The `else if` statement checks whether the year is divisible by 400. If this condition is true, it returns true as well, satisfying the leap year condition.
- If none of the above conditions are met, the else statement is executed, and the function returns false since the year does not meet any of the leap year conditions.

