Document on Control Statements

Control Statements: control statements are used to control the execution of a program based on a specific condition. If the condition is true then a particular block of code will be executed otherwise it will execute another block of code that satisfies that particular condition.

Note: In this to write a block of code we specify parenthesis after condition, it is mandatory when multiple statements are given otherwise no need**.**

1.if-statement: It is used to execute a block of code based on a given condition.

2.nested-if-statement: When you place one if statement inside another if statement it is called nested if statement.

3.else-if-statement: An else if statement is used to specify a new condition to test if the previous if condition is false.

4.else-if-ladder-statement: Multiple else-if statements together called as else-if-ladder.

5.else-statement: An else if statement is used to specify a new condition to test if the previous if (or) else-if condition is false. Simply we can say It provides a default action when none of the specified conditions are met.

EX:

A.Simulate a traffic light system?

Input:

If the light is red, log "Stop."

If the light is yellow, log "Get ready to move."

If the light is green, log "Go."

If the input doesn't match any color, log "Invalid input."

Code: var isLight = "yellow";

```
if (isLight == "red") {

    console.log("stop.");

}

else if (isLight == "yellow") {

    console.log ("Get ready to move.");

}

else if (isLight == "green") {

    console.log("Go.");

}

else {

    console.log ("Invalid input.");

}
```

Output: Get ready to move.

Explanation: Here, we have four statements and we have to print any one of it based on given condition. So, I taken a variable with name isLight with value yellow. After that with I specified first condition with the help of if-statement. If the condition is true, it will call the value written in console.log otherwise, it will check next condition. The same thing will repeat until the condition is true it can be done with the help of else-if statement. If any of the condition is not true then with the help of else-statement we print the output Ex: invalid input. As above mentioned, I taken var name = isLight; it is matched with second condition mentioned in else-if. Therefore, it will print output as "Get ready to move".

B. Write a program that describes the temperature?

Input:

If the temperature is exactly 0, log "It's freezing cold."

If the temperature is exactly 15, log "It's a cool day."

If the temperature is exactly 25, log "It's a pleasant day."

If the temperature doesn't match any of these, log "Unknown weather."

Code: var temperature = 25;

```
if (temperature == 0) {

    console.log ("It's freezing cold.");

}
else if (temperature == 15) {

    console.log ("It's a cool day.");

}
else if (temperature == 25) {

    console.log ("It's a pleasant day.");

}
else {

    console.log ("Unknown weather.");

}
```

Output: It's a pleasant day.

<u>Explanation:</u> Here, we have four statements and we have to print any one of it based on given condition. So, I taken a variable with name temperature and value 25. After that with I specified first condition with the help of if-statement. If the condition is true, it will call the value written in console.log otherwise, it will check next condition. The same thing will repeat until the condition is true it can be done with the help of else-if statement. If any of the condition is not true then with the help of else-statement we print the output Ex: unknown weather. As above mentioned, I taken var temperature = 25; it is matched with third condition mentioned in else-if. Therefore, it will print output as "It's a pleasant day".

C. Create a program that takes input of a number representing the day of the week (1-7)?

Input:

If the number is 2, log "Today is Tuesday."

If the number is 3, log "Today is Wednesday."

If the number is 4, log "Today is Thursday."

If the number is 5, log "Today is Friday."

If the number is 6, log "Today is Saturday."

If the number is 7, log "Today is Sunday."

If the input is not between 1 and 7, log "Invalid day number."

Code: var number = 6;

```
if (number == 1) {
    console.log ("Today is Monday.");
}
else if (number == 2) {
    console.log ("Today is Tuesday.");
}
else if (number == 3) {
    console.log ("Today is Wednesday.");
}
else if (number == 4) {
    console.log ("Today is Thursday.");
}
else if (number == 5) {
```

```
    console.log ("Today is Friday.");

}

else if (number == 6) {

    console.log ("Today is Saturday.");

}

else if (number == 7) {

    console.log ("Today is Sunday.");

}

else {

    console.log ("Invalid day number.");

}
```

Output: Today is Saturday.

Explanation: Here, we have seven statements and we have to print any one of it based on given condition. So, I taken a variable with name number and value 6. After that with I specified first condition with the help of if-statement. If the condition is true, it will call the value written in console.log otherwise, it will check next condition. The same thing will repeat until the condition is true it can be done with the help of else-if statement. If any of the condition is not true then with the help of else-statement we print the output Ex: Invalid day number as above mentioned I taken var number = 6; it is matched with six condition mentioned in else-if. Therefore, it will print output as "Saturday".