ASSIGNMENT 7

Operators in javascript

1.Check if a number is Even or Odd

Write a JavaScript program that prompts the user to enter a number and alerts ‘Even’ if the number is even, or ‘Odd’ if the number is Odd. Use the modulus operator % to check if the number is divisible by 2.

Input (via prompt):

Enter a number: 10

Expected Output (via alert): ‘Even’

Code:

```
let number = +prompt("Enter a number");
      if (number % 2 == 0) {
        alert("Even");
      } else {
        alert("Odd");
      }
```

Output: Even

Explanation:

- let number=+prompt(“Enter a number”); opens a prompt asking the user to enter a number. The + sign before prompt converts the entered value to a number. The entered value is stored in the variable number.
- if(number %2 ==0){ alert(“Even”)} checks if the number is even by calculating the remainder of the division of number by 2. If the remainder is 0, it shows an alert with the message ‘Even’.
- else{alert(‘Odd’)} if the number is not even, it shows an alert with the message ‘Odd’.

Here is how it works:

- If the user enters 4, it will alert message ‘Even’
- If the user enters 7, it will alert messade ‘Odd’.

2.Compare Two Numbers

Write a JavaScript program that prompts the user to enter two numbers and alerts:

‘Greater’ if the first number is greater than the second.

‘Equal’ if both numbers are equal,

‘Smaller’ if the first number is smaller than the second.

Input (via prompt):

Enter the first number: 10

Enter the second number: 5

Expected Output(via alert):

‘Greater’

Code:

```
 let num1 = +prompt("Enter num1");
 let num2 = +prompt("Enter num2");
 if (num1 > num2) {
        alert("Greater");
} else if (num1 == num2) {
        alert("Equal");
} else {
        alert("Small");
      }
```

Output: Greater

Explanation:

- Let num1=+prompt(‘Enter num1’); prompts the user to enter a number for num1.
- Let num2=+prompt(‘Enter num2’); prompts the user to enter a number for num2.
- The if statement checks if num1 is greater than num2. If true, it shows an alert message with ‘Greater’.
- If the first condition is not true, the else if statement checks if num1 is equal to num2. If true, it shows an alert message with ‘Equal’.
- If neither of the previous conditions are ture, the else statement shows an alert message with ‘Small’.

So the output depends on the values entered:

- If num1>num2, the alert will show ‘Greater’
- If num1==num2, the alert will show ‘Equal’
- If num1<num2, the alert will show ‘Small’.

3.Driving Eligibility Check

Write a JavaScript program that prompts the user to enter their age and whether they have a valid driver’s license (true or false). The program should alert ‘Can Driver” if the person is 18 or older and has a valid driver’s license, otherwise it should alert ‘Cannot driver”.

Input (via prompt):

Enter your age:20

Do you have a valid driver;s license (true/false): true

Expected Output(via alert):

‘Can drive’

Code:

```
let age = +prompt("Enter age");
let license = true;
if (age >= 18 && license) {
        alert("Can drive");
} else {
        alert("Can not drive");
}
```

Output: Can drive

Explanation:

- let age =+prompt('Enter age'); prompts the user to enter their age.
- let license=true;sets the license variable to true.
- The if statement checks id age is greater than or equal to 18 and if license is true.

Since license is always true, the driving eligibility depends on the value of age:

- If age is 18 or older, the condition age>=18 && license is true, and the alert will show the message 'Can drive'.
- If age is less than 18, the condition is false, and the alert will show the message 'Can not drive'.

So the output depends on the age entered.

- Enter 20, and you get alert message 'Can drive'.
- Enter 15, and you get alert message 'Can not drive'.

4. Determine if a Number is Positive, Negative, or Zero.

Write a JavaScript program that prompts the user to enter a number and alerts 'Positive' if the number is greater than 0, 'Negative' if the number is less than 0, or 'Zero' if the number is 0.

Input (via propmpt):

Enter a number: 5

Expected Output (via alert):

'Positive'

Code:

```
let num = +prompt("Enter the Number");
if (num > 0) {
        alert("Positive");
} else if (num < 0) {
        alert("Negative");
} else {
        alert("Zero");
}
```

Output: Positive

Explanation:

- let num=+prompt(‘Enter the Number’); prompt the user to enter a number.
- The if statement checks if the number is greater than 0. If true, it shows an alert message “Positive’.
- The else if statement checks if the number is less than 0. If true, it shows an alert message ‘Negative’.
- The else statement covers the case where the number is 0, and shows an alert message ‘Zero’.

Here is how it works:

- If the user enters 5, the alert message show ‘Positive’.
- If the user enters -3, the alert message show ‘Negative’.
- If the user enters 0, the alert message show ‘Zerto’.