**Function in JavaScript**

1. Function in JavaScript to perform a certain task is called functions
2. In function we have function declaration, Function call, perform operation.
3. Function syntax:

Function fun\_name( )

{

Z=a+b

return

}

fun\_name( );

4.We can reuse the code using modules and libraries

5. Functions is broadly divided into 2types

1.User\_Defined functions

2.Pre\_Defined functions

User Defined function: -

In user defined function the input is taking from user and user defined is divided into: -

1.Named function: -

* Named function with parameters
* Named function without parameters
* Named function with default values
* Named function with return
* Named function without return

2.Anonymous function

3.Call by value function

4.Highter order function

5.Arrow function (=>)

6.variable function

7.pure function

8.impure function

9.self-invoking

10.class functions

=============================END=======================================

1.let x = 5;

while (x < 3) {

    console.log(x);

    x++;

}

function fun\_name(x)

{

    while(x<3){

        console.log(x)

        x++;

    }

}

fun\_name(1);

output:-

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1

2

2.let y = 0;

do {

    console.log(y);

    y++;

} while (y < 2);

function fun1(y){

do{

    console.log(y)

    y++;

}

while(y<2)

}

fun1(0)

output:-

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0

1

1. let count = 5;

do {

    console.log(count);

    count--;

} while (count > 0);

function count(x) {

    do{

        console.log(x)

        x--

    }

    while(x>0)

}

count(5)

output:-

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5

4

3

2

1

4.Write a while and do while loop that prints the numbers from 1 to 5 in the console.

function num(n){

    do{

        console.log(n)

        n++

    }

    while(n<5)

}

num(1)

output:-

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1

2

3

4

5How would you exit a while loop if a specific condition is met (e.g., when the number equals 3), Write a example code?

function exit(x){

   while(x<=8){

    console.log(x)

    if (x === 3) {

        break;

    }

    x++;

   }

}

exit(0)

output:-

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0

1

2

3

6.Write an if statement that checks if a number is between 10 and 20 or if it's exactly 30, and prints "Condition met" if true.

function checkNumber(num) {

    if ((num >= 10 && num <= 20) || num === 30) {

        console.log("Condition met");

    }

}

// Test cases

checkNumber(15); // Condition met (15 is between 10 and 20)

checkNumber(30); // Condition met (30 is exactly 30)

checkNumber(25); // No output (25 does not meet the condition)

checkNumber(10); // Condition met (10 is between 10 and 20)

output:

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Condition met

Condition met

Condition met

7.Write an if statement that checks if a number is between 10 and 20 (inclusive). Print "In range" if true, otherwise print "Out of range".

function checkRange(num) {

    if (num >= 10 && num <= 20) {

        console.log("In range");

    } else {

        console.log("Out of range");

    }

}

// Test cases

checkRange(15); // In range

checkRange(25); // Out of range

checkRange(10); // In range

checkRange(20); // In range

checkRange(9);  // Out of range

8Write a nested if statement that checks if a number is positive and, if true, checks if it's even or odd.

function even odd(num){

    if(num>0){

        console.log(`${num} is positive`)

        if(num%2==0){

            console.log(`${num} is even`)

        }

        if(num%2!=0){

            console.log(`${num} is odd`)

        }

    }

}

even odd(3)

output:-

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3 is positive

3 is odd

9. Write an if-else if-else ladder that checks the value of a variable grade and prints:

* "A" for grades 90 and above,
* "B" for grades 80 to 89,
* "C" for grades 70 to 79,
* "F" for grades below 70.

function grade(marks){

    if(marks>=100){

        console.log(`${marks} marks are 90 and above`)

    }

    else if(marks>=90){

        console.log(`${marks} marks are 80 to 89`)

    }

    else if(marks>=80){

        console.log(`${marks} marks are 70 to 79`)

    }

    else if(marks>=70){

        console.log(`${marks} marks are equal to 70`)

    }

    else{

        console.log(`${marks} fail`)

    }

}

grade(50)

output:-

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50 fail

10.Write an if-else statement that checks if a number is even or odd, and prints "Even" if it's even, or "Odd" if it's odd.

function evenodd(num){

    if(num%2==0){

        console.log(`${num} is even number`)

    }

    else{

        console.log(`${num} is odd number`)

    }

}

evenodd(56)

output:-

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1. s even number

11. Rewrite the following code using if else statement:

                let age = 20;

                 console.log (age >= 18? "Adult”: "Minor");

function age(x){

    if(age>=18){

        console.log(`${x} is adult`)

    }

    else{

        console.log(`${x} is minor`)

    }

}

age(34)

output:-

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34 is minor