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**Q Demonstrate following concepts using Java programming language** –

**- For, While, Continue, If, Else, Switch**

**For loop:-**

**Syntax:-**

For(initialization ; condition ; Increment/decrement){}

**//Code**

public class Solution{

public static void main(String args[]){

for(int i=0;i<=5;i++){

System.out.println (“For loop”+i);

}

}

}

**Output:-**0 1 2 3 4 5

**While Loop:-**

**Syntax:-**

While(condition){

Increment/Decrement Statement

}

**//Code**

public class Solution{

public static void main(String args[]){

int i = 1;

while(i<=5){

System.out.println (“While loop”+i);

i++;

}

}

}

Output:-1 2 3 4 5

**Continue:-** it will skip current statement in loop

**Syntax:-**

Jump statement;

Continue;

**Code:-**

public class Solution{

public static void main(String args[]){

for(int i=0;i<=5;i++){

if(i==3){

continue;

}

System.out.println (“Continue Demostation Using For loop”+i);

}

}

}

**Output**:-0 1 2 4 5

**If:-**

**Syntax:-**

If(condition)

{

//statement to execute if condition is true

}

**Code:-**

public class Solution {

public static void main(String args[]) {

int i = 10;

if (i < 15)

System.out.println("statement 1");

System.out.println("statement 2");

}

}

**Output:-** statement 1

Statement 2

**If else:-**

**Syntax:-**

if (condition) {

// Executes this block if condition is true

} else {

// Executes this block if condition is false

}

**Code:-**

public class Solution {

public static void main(String args[]) {

int i = 50;

if (i < 20) {

System.out.println("i is smaller than 20");

} else {

System.out.println("i is greater than 20");

}

}

}

**Output**:- i is greater than 20

**Switch**:-

**Syntax:**-

switch(expression){

case value1:

//code to be executed;

break; //optional

case value2:

//code to be executed;

break; //optional

......

default:

code to be executed if all cases are not matched;

}

**Code**:-

public class Solution {

public static void main(String[] args) {

int num=20;

switch(num){

//Case statements

case 10: System.out.println("10");

break;

case 20: System.out.println("20");

break;

case 30: System.out.println("30");

break;

//Default case statement

default:System.out.println("Not in 10, 20 or 30");

}

}

}

**Output**:-20

**Q Write an implementation of getElementByld, which performs the same basic task as that of actual getElementById, (don't use shortcuts like queryselector)**

The Document method getElementById() returns an Element object representing the element whose id property matches the specified string. Since element IDs are required to be unique if specified, they're a useful way to get access to a specific element quickly. If you need to get access to an element which doesn't have an ID, you can use querySelector() to find the element using any selector.

**Syntax:-**

getElementById(id)

Parameters

**Id**

The ID of the element to locate. The ID is case-sensitive string which is unique within the document; only one element may have any given ID.

**Return value**

An Element object describing the DOM element object matching the specified ID, or null if no matching element was found in the document.

**HTML**

<html lang="en">

<head>

<title>getElementById example</title>

</head>

<body>

<p id="para">Some text here</p>

<button onclick="changeColor('blue');">blue</button>

<button onclick="changeColor('red');">red</button>

</body>

</html>

**Javascript**

function changeColor(newColor) {

const elem = document.getElementById('para');

elem.style.color = newColor;

}

Some text here

|  |
| --- |
| blue |

|  |
| --- |
| red |

<!DOCTYPE html>

<html lang="en-US">

<head>

<meta charset="UTF-8" />

<title>Document</title>

</head>

<body>

<div id="parent-id">

<p>hello word1</p>

<p id="test1">hello word2</p>

<p>hello word3</p>

<p>hello word4</p>

</div>

<script>

const parentDOM = document.getElementById("parent-id");

const test1 = parentDOM.getElementById("test1");

// throw error

// Uncaught TypeError: parentDOM.getElementById is not a function

</script>

</body>

</html>

If there is no element with the given id, this function returns null. Note that the id parameter is case-sensitive, so document.getElementById("Main") will return null instead of the element <div id="main"> because "M" and "m" are different for the purposes of this method.

**Q Given a number x, find out if it is a prime number or not, use javascript and find out the difference between Next prime number after X and X**

// Function to check prime number

function p() {

var n, i, flag = true;

// Getting the value form text

// field using DOM

n = document.myform.n.value;

n = parseInt(n)

for(i = 2; i <= n - 1; i++)

if (n % i == 0) {

flag = false;

break;

}

// Check and display alert message

if (flag == true)

alert(n + " is prime");

else

alert(n + " is not prime");

}