**Task 1: Simple Programs to do for variables**

**1. Declare four variables without assigning values and print them in console:**

var variable1;

var variable2;

var variable3;

var variable4;

console.log(variable1);

console.log(variable2);

console.log(variable3);

console.log(variable4);

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**2. How to get value of the variable myvar as output:**

var myvar= 1;

console.log("myvar");

By Removing "" in console.log

Solution: var myvar = 1;

console.log(myvar);

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**3. Declare variables to store your first name, last name, marital status, country and age in multiple lines :**

var first\_name = "Santhosh";

var last\_name = "Surya";

var marital\_status = "Single";

var country = "India";

var age = 22;

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**4. Declare variables to store your first name, last name, marital status, country and age in a single line:**

var first\_name = "Santhosh", last\_name = "Surya", marital\_status = "Single", country = "India", age = 22;

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**5. Declare variables and assign string, Boolean, undefined and null data types:**

var myAge = 25; // This variable holds an Integer value (number).

var yourAge = 30;

var statement = "I am 25 years old."; // This variable holds a string.

var statement2 = "You are 30 years old.";

var isAdult = true; // This variable holds a Boolean value.

var undefinedVariable; // This variable is declared but not assigned a value.

var nullValue = null; // This variable holds the value 'null'.

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**6. Convert the string to integer**

-->Using parseInt ():

var age= "25";

var Result = parseInt(age);

console.log (Result);

-->Using Number ():

var age = "25";

var Result = Number(age);

console.log (Result);

-->Using Plus sign (+):

var age = "25";

var Result = +age;

console.log (Result);

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**7. Write 6 statement which provide truthy & falsey values:**

Truthy Values:

1. const truthyString = "Hello, GUVI";

- A non-empty string is a truthy value in JavaScript.

2. const truthy Number = 42;

- A non-zero number is a truthy value.

3. const truthy Array = [1, 2, 3];

- A non-empty array is a truthy value.

Falsy Values:

4. const falsyString = "";

- An empty string is a falsy value.

5. const falsyNumber = 0;

- The number zero is a falsy value.

6. const falsyNull = null;

- `null` is a falsy value in JavaScript.

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**Task 2: Simple Programs todo for Operators**

**1. Square of a number:**

var number = 5;

var square value = number \* number;

console.log ("The square of", number, "is", square value);

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**2. Swapping 2 numbers:**

let a = 50;

let b = 60;

console.log ("Before swapping:");

console.log ("a =", a);

console.log ("b =", b);

// Swap the values using a temporary variable

let temp = a;

a = b;

b = temp;

console.log ("After swapping:");

console.log ("a =", a);

console.log ("b =", b);

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**3. Addition of 3 numbers:**

var num1 = 50;

var num2 = 60;

var num3 = 09;

var sum = num1 + num2 + num3;

console.log ("The sum of", num1, "+", num2, "+", num3, "is", sum);

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**4. Celsius to Fahrenheit conversion**

function celsiusToFahrenheit (Celsius) {

var fahrenheit = (Celsius \* 9/5) + 32;

return fahrenheit;

}

var Celsius Temperature = 50;

var Fahrenheit Temperature = celsiusToFahrenheit (Celsius Temperature);

console.log (Celsius Temperature + "°C is equal to " + Fahrenheit Temperature + "°F");

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**5. Meter to miles:**

function metersToMiles(meters) {

var miles = meters \* 0.000621371;

return miles;

}

var meters Distance = 5060;

var miles Distance = metersToMiles(metersDistance);

console.log (metersDistance + " meters is equal to " + miles Distance + " miles");

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**6. Pounds to kg:**

function poundsToKilograms(pounds) {

var kilograms = pounds \* 0.45359237;

return kilograms;

}

var pounds Weight = 133;

var kilograms Weight = poundsToKilograms (pounds Weight);

console.log (pounds Weight + " pounds is equal to " + kilograms Weight + " kilograms");

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**7. Calculate Batting Average:**

function calculateBattingAverage (totalRunsScored, totalDismissals) {

if (total Dismissals === 0) {

return "N/A";

}

var batting Average = totalRunsScored / totalDismissals;

return battingAverage.toFixed(2);

}

// Example usage:

var runsScored = 750;

var dismissals = 15;

var average = calculateBattingAverage (runsScored, dismissals);

console.log ("Batting Average: " + average);

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**8. Calculate five test scores and print their average:**

var score1 = 85;

var score2 = 92;

var score3 = 78;

var score4 = 90;

var score5 = 88;

var total Score = score1 + score2 + score3 + score4 + score5;

var average Score = total Score / 5;

console.log ("Average Score: " + average Score);

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**9. Power of any number x ^ y:**

var x = 9;

var y = 9;

var result = Math. Pow (x, y);

console.log (x + " raised to the power " + y + " is equal to " + result);

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**10. Calculate Simple Interest:**

var principalAmount = 60000;

var rateOfInterest = 5;

var timeInYears = 1;

var simpleInterest = (principalAmount \* rateOfInterest \* timeInYears) / 100;

console.log ("Principal Amount: ₹" + principalAmount);

console.log ("Rate of Interest: " + rateOfInterest + "% per annum");

console.log ("Time in Years: " + timeInYears + " years");

console.log ("Simple Interest: ₹" + simpleInterest);

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**11. Calculate area of an equilateral triangle:**

var sideLength = 5;

var area = (Math.pow (sideLength, 2) \* Math.sqrt(3)) / 4;

console.log ("Side Length: " + sideLength);

console.log ("Area of the Equilateral Triangle: " + area);

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**12.Area of Isosceles Triangle:**

var base = 8;

var height = 6;

var area = (1/2) \* base \* height;

console.log ("Base Length: " + base);

console.log ("Height: " + height);

console.log ("Area of the Isosceles Triangle: " + area);

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**13. Volume of Sphere:**

var radius = 5;

var volume = (4/3) \* Math.PI \* Math.pow (radius, 3);

console.log ("Radius: " + radius);

console.log ("Volume of the Sphere: " + volume);

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**14. Volume of Prism:**

var length = 6;

var width = 4;

var height = 8;

var baseArea = length \* width;

var volume = baseArea \* height;

console.log ("Base Length: " + length);

console.log ("Base Width: " + width);

console.log ("Height: " + height);

console.log ("Volume of the Prism: " + volume);

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**15. Find area of a triangle:**

var base = 6;

var height = 4;

var area = (1/2) \* base \* height;

console.log ("Base Length: " + base);

console.log ("Height: " + height);

console.log ("Area of the Triangle: " + area);