**JavaScript (08-01-2021)**

1) What is JavaScript?

* JavaScript is a light weight, cross-platform, object-oriented computer programming language.
* Lighweight means it does not take much memory of the computer and it’s syntax is easy to learn.
* Cross-platform means we can run the code of javascript in any of the operating system.
* Object-oriented means it is a programming language based on the object.
* JavaScript was traditionally used only in the browser means Client-Side.
* But with the help of node.js we can use javaScript as a serve-side also.
* With the help of JavaScript we can create a dynamic web pages and interactive web application.
* HTML,CSS and javascript all three work together to develop a interactive, beautiful and dynamic web sites or web applications.
* HTML is used for the content in the web sites, CSS is used for designing the websites and javascript is all about programming and to give dynamic effects to the website.

2)Variables and Data Types.

* There are four types of Data Types in JavaScript and they are as follows:-

1) Number :- Floating Point Numbers , for decimals and integers.

2) String :- Sequence of Characters, used for text.

3) Boolean :- Logical data type that can only be true or false.

4) Undefined :- Data type of a variable that does have a value yet.

5) Null :- also means ‘non-existent’

* In JavaScript we don’t have to specify specially the data type of the variable at the time of declaring the variables it automatically interpret the variable type.
* In Javascript the rules for declaring the variables is:-

1. Always start with letter.
2. Don’t use number , special characters ($,\_ can be used).
3. We can not use javascript keywords as a variable names.

3)Variable Mutation and Type Coercion.

* Type Coercion means in JavaScript the data type convert from one data type to another when needed.
* Variable mutation means in javascript we can change the value of the variable at any time when we need.

4)Basic Operators.

* There are many operators in JavaScript and they are as follows:-

1. Arithmetic Operator
2. Logical Operator
3. Assignment Operator
4. Comparison Operator

* Arithmetic operator

1) Addition(+) :- add two operand (a+b)

2) Subtraction(-) :- subtract two operand (a-b)

3) Multiplication(\*) :- multiply two operand (a\*b)

4) Division (/) :- Divide two operand (a/b)

5) Modulus (%) :- Output the remainder of the integer division (a%b)

6) Increment (++) :- increase an integer value by 1 (i++)

7) Decrement (--) :- decrease an integer value by 1 (i--)

* Comparison operator

1. Equal(==) :-to check that the value of the two operand are equal or not. If

the yes the condition is true.(a==b)

1. Not equal(!=) :- to check that the value of the two operand are equal or

not, if not equal then condition is true. (a!=b)

1. Greater than(>) :- to check whether the left operand is greater than the

right operand or not (a > b)

1. Less than(<) :- to check whether the left operand is less than the right

operand or not (a<b)

1. Greater than or Equal to(>=) :- to check whether the left operand is greater

or equal to the right operand or not(a>=b)

1. Less than or Equal to(<=) :- to check whether the left operand is less than

or equal to the right operand or not(a<=b)

* Logical Operator operator

1. &&(Logical AND) :- if both the condition is true then the result return

true.

1. ||(Logical OR) :- if any one of the condition is true then the result return

True.

1. !(Logical Not) :- if the condition return true then logical not return false.

5)Operator Precedence

* Operator precedence tells about which operator have the higher priority than other.