**JavaScript Introduction:**

JavaScript is the programming language of the web. JavaScript is used to create dynamic WebPages.

JavaScript is an object- based scripting language which is lightweight and cross platform. And it is not a compiled language but it is a translated language. Java Script to program the behavior of WebPages.

**Application of JavaScript**:

JavaScript is used to create interactive websites. They are

Client-side validation.

Dynamic drop-down menus.

Displaying date and time.

Display pop-up windows and dialog boxes.

Displaying clocks.

**Functions:**

Functions define the code once, and use it many times.

You can use same code many times with different arguments, to produce different results.

A JavaScript function is a block of code designed to perform a particular task.

A JavaScript function is defined with the function keyword, followed by parentheses ().

Function names can contain letters, digits, underscores, and dollar signs (same rules as variables).

The parentheses may include parameter names separated by commas.

The code can be executed, by the function, is placed inside curly brackets {}.

Functions can be used the same way as you use variables, in all types of formulas, assignments, and calculations.

Local variables can only be accessed from within the function.

**Function return:**

When JavaScript reaches a return statement, the function will stop executing.

If the function was invoked from a statement, JavaScript will “return” to execute the code after the invoking statement.

Functions often compute a return value. The return value is “returned” back to the “Caller”.\

**Object:**

In real world everything is an object. For example employee, car, person, book and etc… are the objects.

As a programmer we have to consider everything is an object in the real world.

An object consists of properties and methods.

Property names must be same for same object. Property values differ from object to object.

Objects also a type of variables, but it consist of combination of variables.

The values are written as name: value pairs.

Java-script objects are containers for named values called properties or methods.

**Object Declaration:**

For example below is the object declaration for employee.

Var employee {

Var firstName;

Var department;

Var location;

Var salary;

}

**Object Definition**:

For example below is the object definition for employee.

Var employee1 {

firstName: “ravi”;

department:” IT”;

location: “Hyderabad”;

salary:100000;

}

Var employee2 {

firstName: “ravi”;

department:” IT”;

location: “Hyderabad”;

salary:100000;

}

**Object properties:**

The name: value pairs in java-script objects are called properties.

**Example:**

Property name property value

First name UdayKiran

Last Name Mallela

Age 25

**Accessing Object Properties:**

Accessing objects properties are two types, they are

1. objectName: property name

2. objectName [“property name”]

**Example:**

Person.firstName;

Person [“firstName”];

**Object methods:**

Method is a function stored as a property.

Method are actions that can be performed on object.

**Example**:

Var person = {

firstName: “uday”;

lastName: “Mallela”;

color:”white”;

}

**“This” keyword**:

This refers to the “owner” of the function.

For example

Person.firstName;

this.firstName;

**Do not declare the strings, numbers and Booleans as objects**:

When java-script variables declared with the keyword “New”, the variable created as an objects.

For example:

Var x= New string(); //it declares x as a string object.

Var y= New number(); //it declares y as a number object.

Var z=new Boolean(); //it declares z as a Boolean object.

**Java script Events**:

Java-script events are

* On-click.
* On-blur.
* On change
* On load
* On mouse hover.
* On mouse out.
* On key down.

Above all are events.

Event handlers can be used to handle and verify user input, user actions and browser actions.

* Things that should be done every time a page loads.
* Things that should be done when the page is closed.
* Action that should be performed when a user clicks a button.
* Content that should be verified when a user inputs data and more.

**Java-script strings**:

A java-script string is zero or more characters written inside quotes.

We can use single or double quotes.

**String length**:

To findthe length of the string. Use the built-in length property.

**String can be objects**:

Normally, java-script strings are primitive values, created from literals.

Var firstName = “john”;

But strings can also be defined as objects with the keyword “new”

Var firstName = new string (“john”);

**Arrays:**

Collection of indexed elements is called Arrays. It can be store multiple values in a single variable.

A array is special variable. This can hold more than one value at a time.

An array can hold many values under a single name, and you can access the values by referring to an index number.

Arrays are special type of objects. The typeof operator in JavaScript return “objects” for arrays.