Agenda
1) **What is javascript**
2) **How to run js on the browser**
3) **Variables in js**
4) **How js is dynamically typed language**
5) **Datatypes in js**
6) **Function in js**
7) **Arrays in JS**
8) **Objects in JS**

Everything in JS is an object

Javascript is a language that is used to add interactivity to your website.

Browser
- **Chrome**
  - **V8 Engine**
- **Mozilla**
  - **Spider Monkey**

Nodejs
- **V8 Engine**

To run your js in html
1) **Script tag**
   a) **Advantages**
      i) **Easier to write code**
      ii) **So this is faster on the first load**

2) Js as an external file and link it using a script
   a) Advantages
      i) Code is reusable
      ii) HTML is not messy
      iii) JS can be cached
      iv) HTML would become smaller
      v) You need to download the js file which has an overhead

3) Inline js which is applied to each html element
   a) Homework

How to run js
Open browser
Run html
Right click
Open inspect
Open console
And you can see your console values here

Console is a playground to run your javascript.

Variable in javascript

var a = 10;

Dynamically typed language

var a =10;
var b = "abc";
var c = true;

Primitive Data Types in javascript
1) **Number**
2) **Boolean**
3) **String**
4) **Undefined**
   a) When a variable in declared but it has no value javascript automatically makes it undefined
   b) Empty value when given by javascript automatically is known as undefined
5) **Null**
   a) Empty value that would be given by the developer wherever it is needed.
   b) Explicitly set an empty value for a variable you would give it a null value
6) **== and ===**
   a) Difference
      i) == check only for the value instead of the type as well
      ii) === == will check the value extra = would check the type as well

7) Type conversion(coercion)(Implicit)(explicit)
   a) Numeric Conversion - when you have == and on one side you have a number and on the other side you have string. String would be converted to a number in order to compare the values.
      i) Explicit conversion happens when I add a + in front of string;
   b) String conversion - when a number is converted to a string(+ is between a number and string)
8) NaN - Data type of NaN - Number
9) Object Datatype
   a) Array
   b) Object
   c) Function
10) Array -
   a) var a = [1,2,3,4,5,6];
   b) var b = [1,2,"hello", "world", 3, function(){}]

a | 10
x123lx

b | 20
x123lz