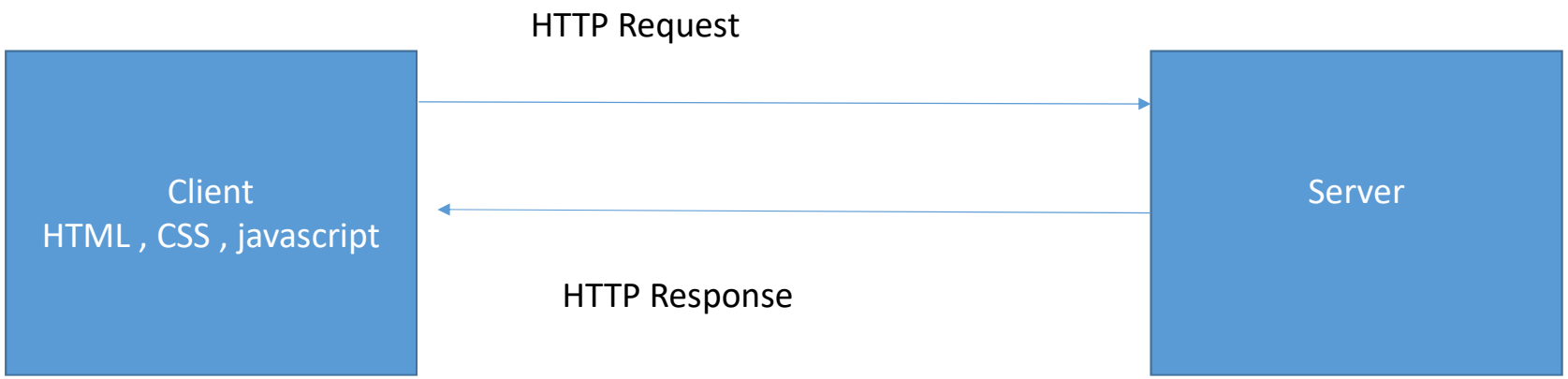
JavaScript

javaScript : CoreJavaScript

es5

Client Side Technologies : HTML , CSS , JS

HTML and CSS : static page



Simple Calculator
1+2=3

javaScript features

1- loosely types language : not strongly typed language
strongly typed language : c , c++
int x = 10;
x=“string”
Loosely typed : variable type will be determined according it’s value
Use keyword var ;
1- var x; // undefined : typeof
x=“iti” // typeof x : string
x=10;// typeof x : number

int myvar=10;
myvar="i"// compile time error

strongly types language

js : loosely typed language :
variable type will be determined according values
var myvar=10; // number
myvar="nasr"; myvar.length : 4

Type system of JS

str2”);

- Primitive Types :
- Undefined

Var t ;

- String
- Var str = “i” | ‘i’
- Number
- Var num = 10 ; | 10.5
- Null
- Boolean
- Var test = true;|false

- Object Types
- Date
- Array
- ….

Language objects

Browser objects : BO

HTML objects : DO

User defined objec

Feature Of JS : Cont.

2- **Object** Based Language

- User Defined Objects {id:100,name:”ali”,city:”mansoura”}
- Language Objects (Number , Math , Date , String , …..)
- Browser Objects (navigator , Window , History , ….) : BOM
- HTML Objects : DOM

3- **interpreted Language**

from top to bottom : left to right

line 1:

line 2:

line 3:Error

Javascript Features cont.

4- event handling

5- integrated with html

6- case Sensitive :

```
var a;
var A;
```

Where To Write JS

1- External Script : File With Extension .js

2- Internal HTML : Within Script Tag

- <head>
  - <script>
    - //code
  - </script>

</head>

- Allowed Write Script Code inside body tag within script

```
<body>
        <script>
                // code
        </script>
</body>
```

Where to Write JS

3- inline script : event handling scripts

<button **onclick="function call()"/>**

Program

Set of instructions : add value for user

Declare variables

Control statements

Create function

……

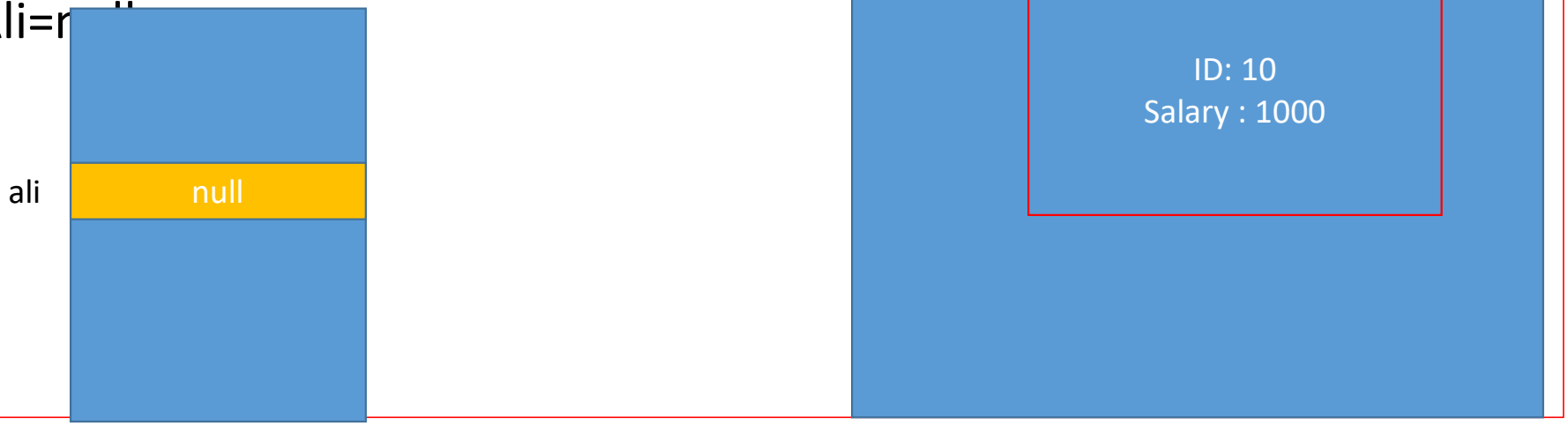
null

Objects :

Person class {id: , salary:}

Var ali = new Person(10,1000);

Ali=r



Variable scope

1- global scope (script scope)

- if you declared variable inside script tag

- if you declare variable inside function without var keyword : after call for this function , variable will be accessible inside script tag

2- local scope (function scope)

- if you define it inside function using var keyword

Dialogs in js

- Prompt (“”,””) => return string | null
- alert(“value”);=> display value , return undefined
- Confirm(“message”);=> return true | false (boolean)

To parse string to number

parseFloat()

- parseInt(“string”) => number | NaN

1- trim string (remove all spaces from start and end for passed string)

parseInt(“ 123 ”)=>parseInt(“123”)

- if length for string after trimming =0 => return NaN

else :

check first character if not digit return NaN

if digit , return it as number then stop if faced non digit character or reached to end of string

“ ” : “” => Na
“ 123ABC123” =
“123ABC123”=>12
“ABC123”=>NaN

NaN : Not a number

== equal operator
100==100 > true
“100”==100 => “100” == “100” >true

=== strickt equality
“100”===100 > false

1- NaN special value in js from type Number

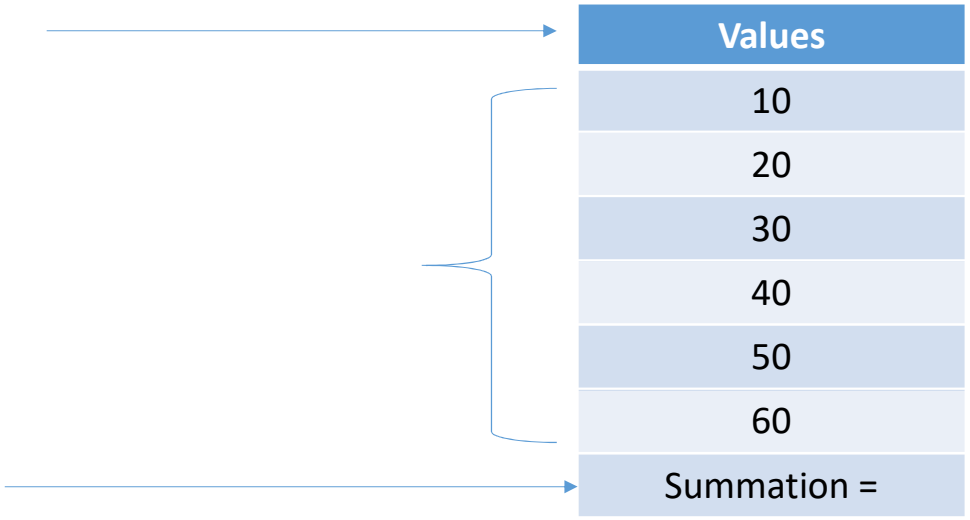
but – not equal any thing even NaN

- toxic value : if written in any expression then result for this expression will be NaN

Write , writeln with document object

We use it to write any value inside body

```
Var arr=[10,20,30,40,50,60];
```



String type

To declare string double quotes or single quotes

Var str = “iti”;

Var str = ‘iti’; string

---- property length : return number of letters

-- methods : manipulation

Slice , substr , substr , indexOf , lastindexOf , replace , charAt , ..

Formatting : bold , font , italics