BIT 2nd Year
Semester 3
IT 3505

Web Application Development II

Advanced Client Side Development – Part 1

JavaScript Data Types

Basic Types

- Number
  - numbers are represented as 16 bit double precision floating point numbers.
  - Large integers and some decimal values representation is not exact.

  Example 0.1 + 0.2
  - Integer division result in either an integer or a floating point number.
- Boolean
- String

Boolean values

- false, 0, Nan, null, undefined are evaluated to the Boolean value false
- All other values are evaluated to true.

String to a number

- parseInt(“1234”)
- parseFloat(“12.23”)
- Infinity and NaN are special numbers in JavaScript.
- The function isNaN() can be used to check whether a n object is a number or not.

example:

isNaN(parseInt(“abc”))

This will return the Boolean value **true**.

Strings

- var a = “this is a string”;
- var a = ‘this is a string’;
- var a = 5 + 2 + “ a string”; this will results the string ‘7 a string’
- var a = “a string ” + 5 + 2 ; this will results the string ‘a string 52’
- “I went home”.indexOf(“went”) ; result is 2

  If the string is not found -1 will return
- “I went home”.substr(2,3) ; start index, string length
- “I went home”.slice(2,5) ; start index, up to position index

Strings

- “1,2,3”.split(“,”) ; split the string by using the symbol “,” into an array.
- “ abc def”.trim();
- “aabbcc”.search(/[bb]/) ; regular expression delimiters” /reg expr /
- “aabbcc”.replace(/[bb]/,”d”); only the first b is replaced

Complex types

- Arrays
- Objects

```
x = {};
```

- Functions

```
function(x){
  console.log(x);
 }
```

Arrays

Creating arrays

```
var a1 = new Array('abc','def');
```

or

```
var a1 = ['abc','def'];
```

Arrays are numerically indexed starting with the index 0.

Individual array items can be of different types.

Example :

```
var a = [1,2,[3,'abc'],'xyz'];
```

Array properties

- var a = [1,2,3];

- a.length;
- Array.isArray(a); // Returns true
- typeof a ; // returns ‘object’

Adding/replacing/deleting elements to an array

- var a = [1,2,3];
- a[a.length] = 4;
- a.push(5);
- a[1] = ‘abc’;
- a[10] = ‘abc’;
- delete a[2]; //set the value at index 2 undefined
- A.splice(stratindex,endindex) ; // remove lements from startindex up to endindex

Functions on arrays

- var a = [1,2,3];
- a.push(5);
- a.pop() // pop off the last element from the array a
- a.shift() // remove the first element from the array a

Obtaining the type of an object

```
x= {};
typeof x;
y = “abc”;
typeof x;
```