

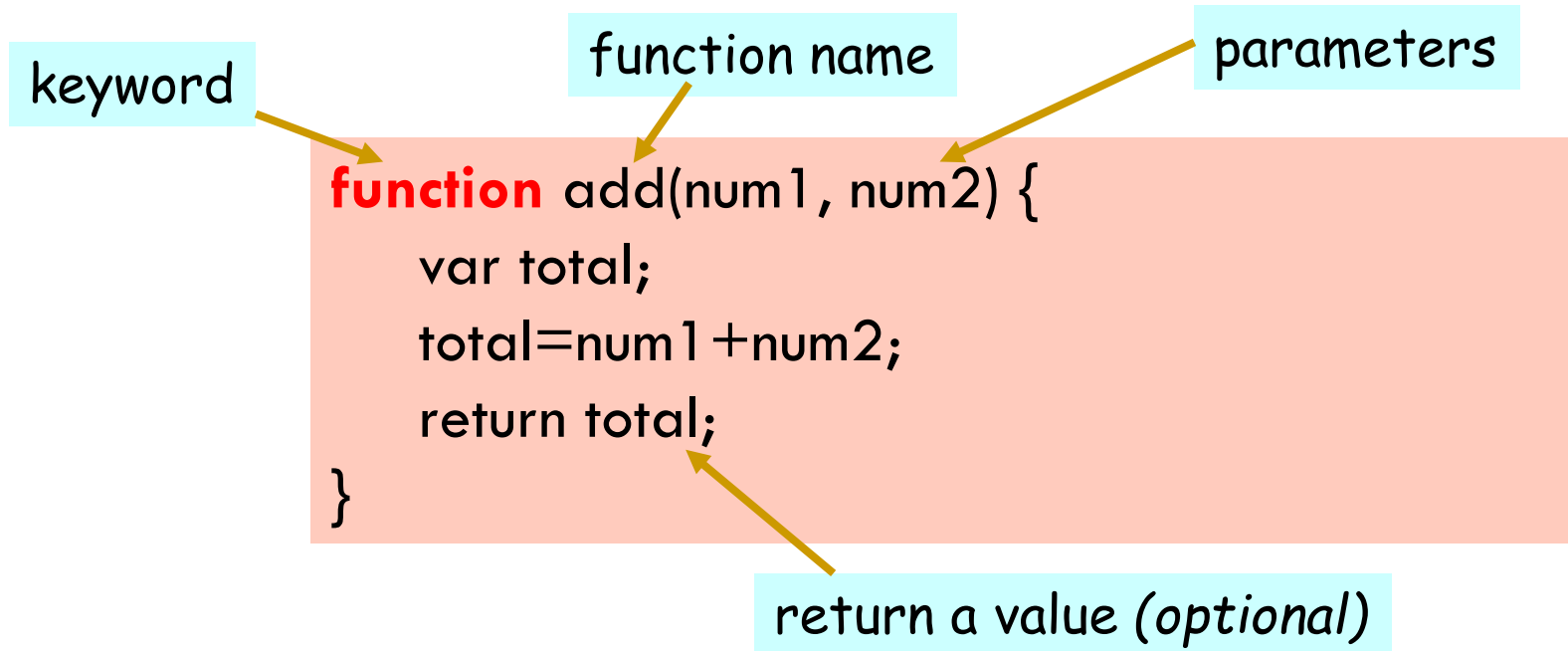
# JAVASCRIPT II

IT1301 UX Design

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# FUNCTIONS

- Function is a block of reusable code for a particular purpose.
- Example of defining a function:



# FUNCTIONS

Once a function is **defined**, it can be executed many times as required by **calling** the function.

Variable to hold return value

```
var sum=add(2, 3);
```

function name

argument

```
function add(num1, num2) {  
    var total;  
    total=num1+num2;  
    return total;  
}
```

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# FUNCTIONS

## User defined functions

- Defined by users

## Built-in functions

For example:

- `eval()` – evaluate the value
- `parseInt()` – convert to integer
- `isNaN()` – is not a number ?

# USER DEFINED FUNCTION — ANOTHER EXAMPLE

The name of the function: \_\_\_\_\_

Number of parameter expected: \_\_\_\_\_

Purpose of the function: \_\_\_\_\_

What does the function return? \_\_\_\_\_

```
function getSquareArea(side) {  
    var area=side*side;  
    return area;  
}
```

**Define Function**

# USER DEFINED FUNCTION — ANOTHER EXAMPLE

The name of the function: **getSquareArea**

Number of parameter expected: **1**

Purpose of the function: **calculate area of square**

What does the function return? **area of square**

```
function getSquareArea(side) {  
    var area=side*side;  
    return area;  
}
```

**Define Function**

# USER DEFINED FUNCTION — ANOTHER EXAMPLE

```
var side=2;  
var areaOfSquare=getSquareArea(side);
```

**Call Function**

Name of function called: \_\_\_\_\_

Number of argument passing in: \_\_\_\_

Value of argument: \_\_\_\_

Value returned by the function \_\_\_\_\_

Where the value is being stored? \_\_\_\_\_

Example

# USER DEFINED FUNCTION — ANOTHER EXAMPLE

```
var side=2;  
var areaOfSquare=getSquareArea(side);
```

Call Function

Name of function called: **getSquareArea**

Number of argument passing in: **1**

Value of argument: **2**

Value returned by the function **4**

Where the value is being stored? **areaOfSquare**



# BUILT-IN FUNCTIONS

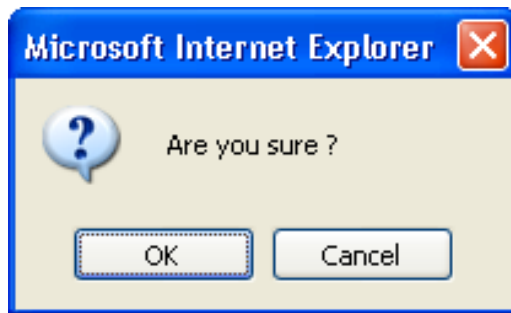
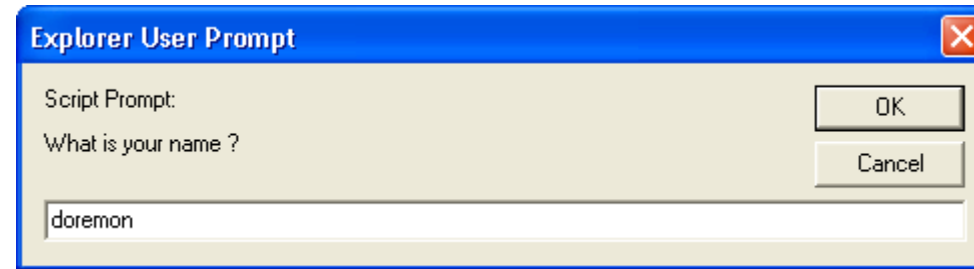
Functions which are already defined. Examples:

```
alert("Yeah!");  
  
var name=prompt("What is your name","");  
  
var isSure=confirm("Are you sure?");  
  
var number=parseInt("123"); // 123  
  
var isNotNumber=isNaN("88"); // false
```

# BUILT-IN FUNCTION (EXAMPLES)

The 3 different kinds of popup dialog boxes.

prompt



confirm



alert

# BUILT-IN FUNCTION (EXAMPLES)

## Example 1:

Experience with 3 different kinds of popup dialog boxes.

```
<html>
<body>
<script type="text/javascript">
<!--
var name=prompt("What is your name ?");
var answer=confirm("Are you sure ?");
if (answer==true) {
    alert("Hi "+name+", nice to meet you");
} else {
    alert("Can't remember your name?! That's ok! Relax");
}
window.close();
-->
</script>
</body>
</html>
```

# BUILT-IN FUNCTION OF JAVASCRIPT DEFINED OBJECTS

There are some useful JavaScript defined objects which come with useful functions: Examples:

```
document.write("Hello World!!"); // print Hello World

var randomNumber=Math.random(); // A Number from 0 to < 1

var now=new Date();
var thisYear=now.getFullYear();

var myNumber=8;
var numberBinary=myNumber.toString(2) // 1000
```

# THE JAVASCRIPT OBJECT: **STRING**

✚ To assign a string to a variable

- ✚ `myFeeling="sleepy"`

- ✚ `degree="extremely"`

✚ To join (concatenate) two strings

- ✚ `mode = degree + " " + myFeeling`

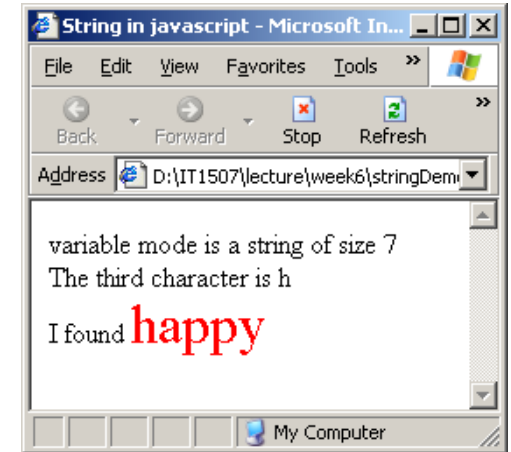
(the value of mode is "extremely sleepy")

# THE JAVASCRIPT OBJECT: **STRING**

## What other ways can we manipulate String ?

■ Built-in function *(not limited to these)*

- `charAt(i)` // get the character at position i. (index starts from 0)
- `substr(startIndex,length)` // extract the substring
- `length` // the size of the String



```
<html>
<head>
  <title>String in javascript</title>
</head>
<body>
  <script type="text/javascript">
    var mode="unhappy";
    document.write("variable mode is a string of size "+mode.length+"<br/>");
    document.write("The third character is "+mode.charAt(2)+"<br/>");
    document.write("I found <span style='color:red; font-size:+2em'>" + mode.substr(2,5) + "</span>");
  </script>
</body>
</html>
```

Example