

Session 05

Webpages programming

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Agenda

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Introduction

- Javascript is a scripting language produced by Netscape for use within HTML Web pages.
- JavaScript is loosely based on Java and it is built into all the major modern browsers.
- A JavaScript consists of JavaScript statements that are placed within the `<script>... </script>` HTML tags in a web page.
- You can place the `<script>` tag containing your JavaScript anywhere within you web page but it is preferred way to keep it within the `<head>` tags.
- The `<script>` tag alert the browser program to begin interpreting all the text between these tags as a script.

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- JavaScript segment will look like:

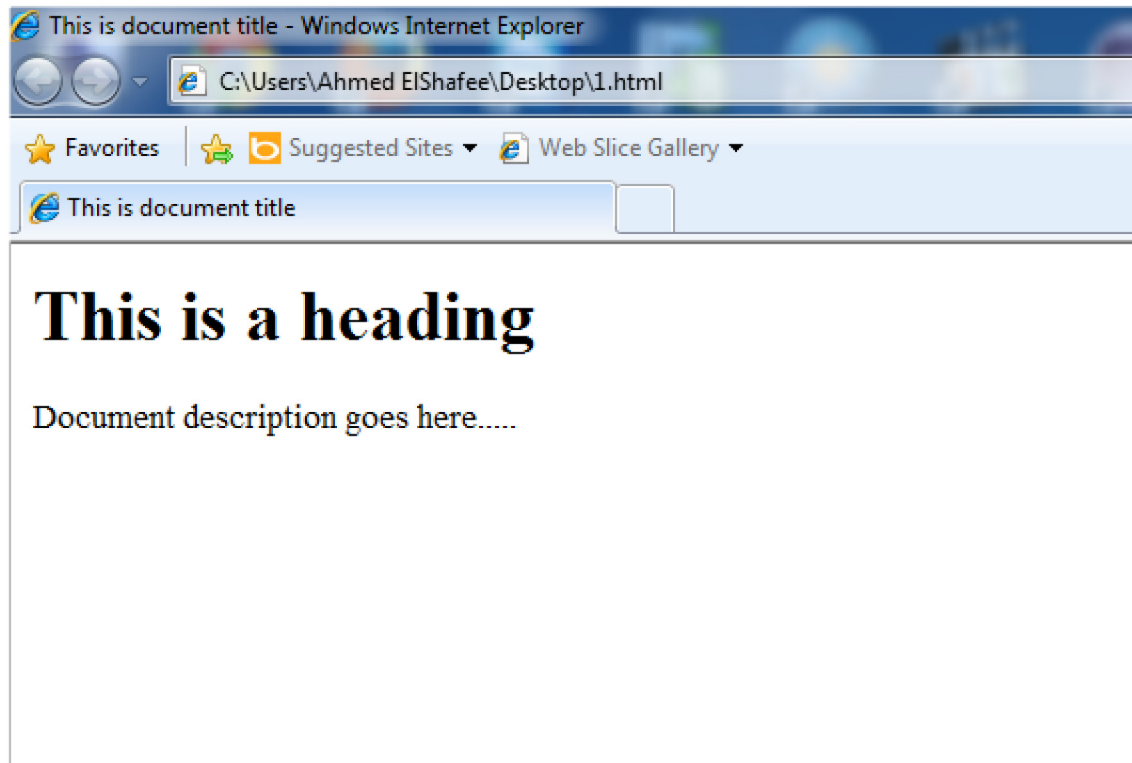
```
<script language="javascript" type="text/javascript">  
JavaScript code  
</script>
```

HTML

- HTML stands for **H**ypertext **M**arkup **L**anguage, and it is the most widely used language to write Web Pages.
- As its name suggests, HTML is a markup language.
- Open Notepad or another text editor, type the following code

```
<html>
<head>
<title>This is document title</title>
</head>
<body>
<h1>This is a heading</h1>
<p>Document description goes here.....</p>
</body>
</html>
```

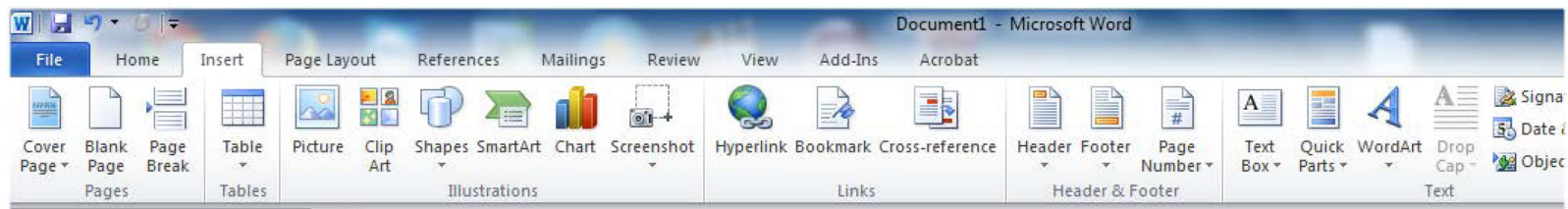
- Save file with .html extension, open it from web browser



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- Another html example,

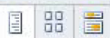
```
<html>
<head>
<title>HTML Basic tags</title>
</head>
<body>
<p>This is a paragraph tag.<br>
<a href="http://draelshafee.net/fall2013.html"> Fall 2013 lecture notes</a> <br>

</p>
</body>
```



Navigation

Search Document



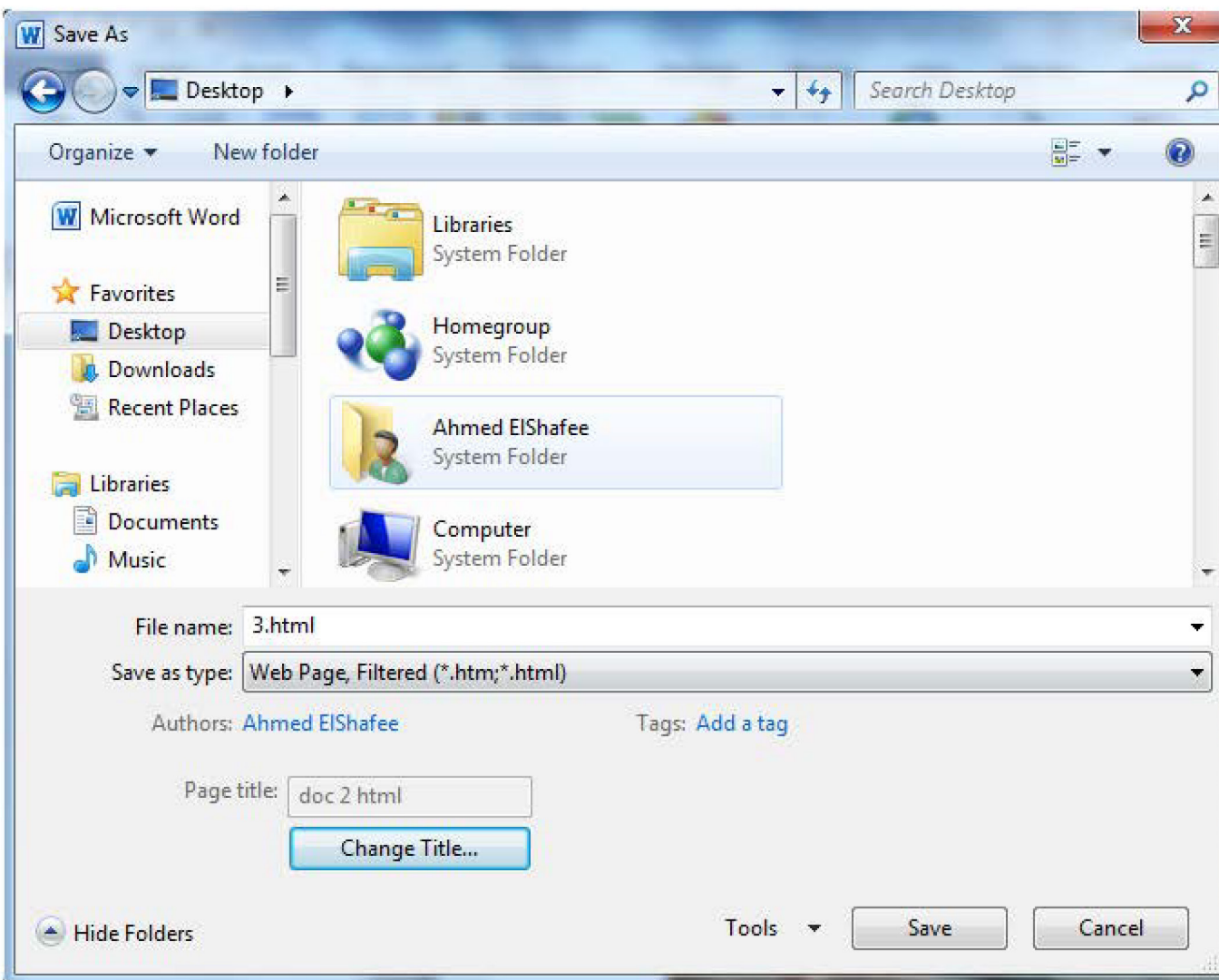
This document does not contain headings.

To create navigation tabs, create headings in your document by applying Heading Styles.

This is doc file save as html file

www.draelshafee.net/fall2013.html

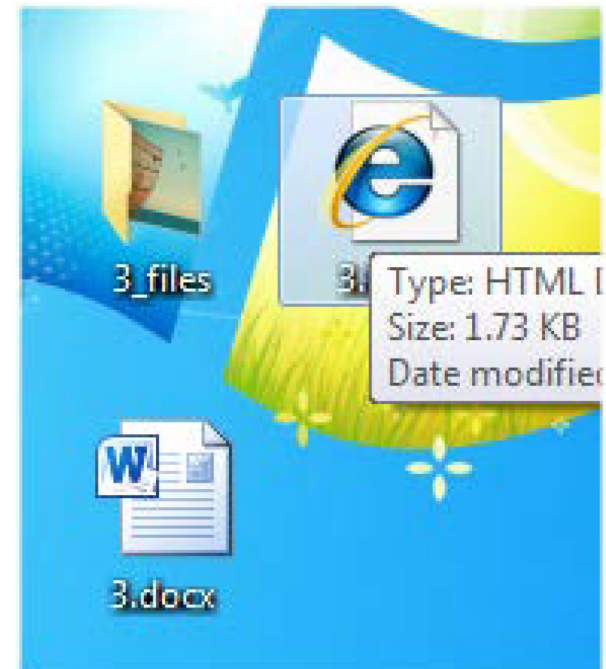






This is doc file save as html file

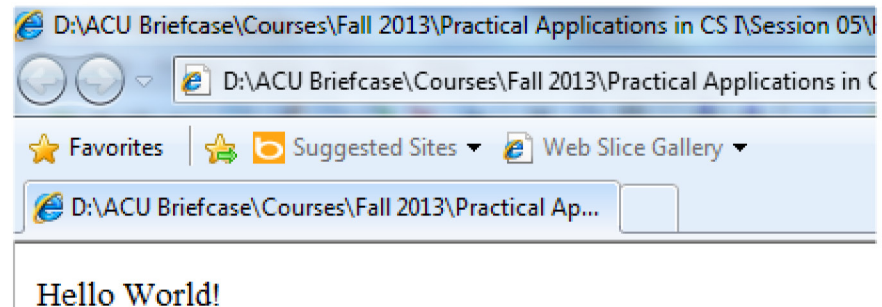
www.draelshafee.net/fall2013.html



plications

First JavaScript Script

```
<html>
<body>
<script language="javascript" type="text/javascript">
<!--
document.write("Hello World!")
//-->
</script>
</body>
</html>
```



Java Script properties

1. Whitespace and Line Breaks are ignored
2. Semicolons are Optional
3. Case Sensitivity
4. Comments in JavaScript `//` or `/* ----*/`

JavaScript Placement in HTML File

- Script in <head>...</head> section.
- Script in <body>...</body> section.
- Script in <body>...</body> and <head>...</head> sections.
- Script in an external file and then include in <head>...</head> section.

JavaScript DataTypes

- Numbers eg. 123, 120.50 etc.
- Strings of text e.g. "This text string" etc.
- Boolean e.g. true or false.

JavaScript Variables

- **Declaration**

```
<script type="text/javascript">  
<!--  
var money;  
var name;  
//-->  
</script>
```

- **Scope**

- Global Variables
- Local Variables

- **JavaScript Variable Names**

- Not a reserved keyword
- begin with a letter or the underscore character
- case sensitive

Functions

- **Definition**

```
<script type="text/javascript">  
function functionname(parameter-list)  
{  
  statements  
}  
</script>
```

- **Call**

```
<script type="text/javascript">  
sayHello();  
  
</script>
```

Alert Dialog Box

```
<head>  
<script type="text/javascript">  
alert("Warning Message");  
</script>  
</head>
```

Confirmation Dialog Box

```
<head>
<script type="text/javascript">
var retVal = confirm("Do you want to continue ?");
if( retVal == true ){
alert("User wants to continue!");
return true;
}else{
alert("User does not want to continue!");
return false;
}

</script>
</head>
```

Prompt Dialog Box

```
<head>
<script type="text/javascript">

var retVal = prompt("Enter your name : ", "your name here");
alert("You have entered : " + retVal );

</script>
</head>
```

Page Re-direction

```
<head>  
<script type="text/javascript">  
  
window.location="http://www.newlocation.com";  
  
</script>  
</head>
```

- Redirect with delay

```
<head>
<script type="text/javascript">
function Redirect()
{
window.location="http://www.newlocation.com";
}
document.write("You will be redirected to main page in 10 sec.");
setTimeout('Redirect()', 10000);
</script>
</head>
```

- Redirect according to browser

```
<head>
<script type="text/javascript">
var browsername=navigator.appName;
if( browsername == "Netscape" )
{
window.location="http://www.location.com/ns.htm";
}
else if ( browsername == "Microsoft Internet Explorer")
{
window.location="http://www.location.com/ie.htm";
}
else
{
window.location="http://www.location.com/other.htm";
}
</script>
</head>
```

The Page Printing

```
<head>
<script type="text/javascript">
<!--
//-->
</script>
</head>
<body>
<form>
<input type="button" value="Print" onclick="window.print()" />
</form>
</body>
```

Cookies

- Storing

```
document.cookie = "key1=value1;key2=value2;expires=date";
```

- Restoring

```
alert (document.cookie) ;
```

Exceptions

```
<head>
<script type="text/javascript">
<!--
function myFunc()
{
var a = 100;
try {
alert("Value of variable a is : " + a );
}catch ( e ) {
alert("Error: " + e.description );
}finally {
alert("Finally block will always execute!" );
}
}
//-->
</script>
```

```
</head>
<body>
<p>Click the following to see the result:</p>
<form>
<input type="button" value="Click Me" onclick="myFunc();" />
</form>
</body>
</html>
```

```
<html>
<head>
<script type="text/javascript">
<!--
function myFunc()
{
var a = 100;
var b = 0;
try{
if ( b == 0 ){
throw( "Divide by zero error." );
}else{
var c = a / b;
}
}catch ( e ) {
alert("Error: " + e );
}
}
//-->
</script>
```

```
</head>
<body>
<p>Click the following to see the result:</p>
<form>
<input type="button" value="Click Me" onclick="myFunc();" />
</form>
</body>
</html>
```

onerror()

```
<html>
<head>
<script type="text/javascript">
<!--
window.onerror = function () {
alert("An error occurred.");
}
//-->
</script>
</head>
<body>
<p>Click the following to see the result:</p>
<form>
<input type="button" value="Click Me" onclick="myFunc();" />
</form>
</body>
</html>
```

The String Object

- Deceleration

```
var val = new String(string);
```

The Arrays Object

- Declaration

```
var fruits = new Array( "apple", "orange", "mango" );
```

```
var fruits = [ "apple", "orange", "mango" ];
```

- usage

```
Alert(fruits[0])  
Alert(fruits[1])  
Alert(fruits[2])
```

Date Object

- declaration

```
new Date( )  
new Date(milliseconds)  
new Date(datestring)  
new Date(year,month,date[,hour,minute,second,millisecond ])
```

Math Object

```
var pi_val = Math.PI;  
var sine_val = Math.sin(30);
```

Thanks,..
See you next week (ISA),...