

Website Design 2

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ARTS 370 – 02

Fall 2016

Thursday 2:00 pm – 5:50 pm

I-Building 213

Week 1 - 7

Week 01: Review of the Web, HTML and CSS

Week 02: The ABCs of Programming and JavaScript

Week 03: Functions, Methods and Objects

Week 04: Decisions and Loops

Week 05: Document Objects and Events

Week 06: jQuery

Week 07: Midterm Presentation

CHAPTER 3

FUNCTIONS, METHODS & OBJECTS



WHAT IS A FUNCTION?



Functions let you group a series of statements together to perform a specific task.



Functions are reusable and save you from writing out the same code over and over.



DECLARING A FUNCTION



function




```
function sayHello()
```



```
function sayHello() {  
    document.write( 'Hello' );  
}
```



KEYWORD

```
function sayHello() {  
    document.write( 'Hello' );  
}
```



FUNCTION NAME

```
function sayHello() {  
    document.write( 'Hello' );  
}
```



```
function sayHello() {  
    document.write( 'Hello' );  
}
```

CODE BLOCK (IN CURLY BRACES)



CALLING A FUNCTION



```
sayHello();
```



```
sayHello();
```



FUNCTION NAME



DECLARING A FUNCTION THAT NEEDS INFORMATION



function



```
function getArea()
```



```
function getArea(width, height)
```



```
function getArea(width, height) {  
    return width * height;  
}
```




PARAMETER PARAMETER



```
function getArea(width, height) {  
    return width * height;  
}
```



```
function getArea(width, height) {  
    return width * height;  
}
```



**THE PARAMETERS ARE USED LIKE
VARIABLES WITHIN THE FUNCTION**



CALLING A FUNCTION THAT NEEDS INFORMATION




```
getArea(3, 5);
```



```
getArea(3, 5);
```

ARGUMENTS



OBJECTS



Objects **group together**
variables and functions to
create a model.



In an object, variables and functions take on new names. They become **properties** and **methods**.



Each property or method consists of a **name** (also known as a **key**) and its corresponding **value**.



```
var hotel = {  
  name: 'Quay',  
  rooms: 40,  
  booked: 25,  
  gym: true,  
  roomTypes: ['twin', 'double', 'suite'],  
  checkAvailability: function() {  
    return this.rooms - this.booked;  
  }  
};
```



QUAY
HOTEL

```
var hotel = {
  name: 'Quay',
  rooms: 40,
  booked: 25,
  gym: true,
  roomTypes: ['twin', 'double', 'suite'],
  checkAvailability: function() {
    return this.rooms - this.booked;
  }
};
```


NAMES (KEYS)

```
var hotel = {  
  name: 'Quay',  
  rooms: 40,  
  booked: 25,  
  gym: true,  
  roomTypes: ['twin', 'double', 'suite'],  
  checkAvailability: function() {  
    return this.rooms - this.booked;  
  }  
};
```

VALUES

```
var hotel = {  
  name: 'Quay',  
  rooms: 40,  
  booked: 25,  
  gym: true,  
  roomTypes: ['twin', 'double', 'suite'],  
  checkAvailability: function() {  
    return this.rooms - this.booked;  
  }  
};
```

PROPERTIES

```
var hotel = {  
  name: 'Quay',  
  rooms: 40,  
  booked: 25,  
  gym: true,  
  roomTypes: ['twin', 'double', 'suite'],  
  checkAvailability: function() {  
    return this.rooms - this.booked;  
  }  
};
```

METHOD

```
var hotel = {  
  name: 'Quay',  
  rooms: 40,  
  booked: 25,  
  gym: true,  
  roomTypes: ['twin', 'double', 'suite'],  
  checkAvailability: function() {  
    return this.rooms - this.booked;  
  }  
};
```

ACCESSING OBJECTS



```
var hotelName = hotel.name;
```




```
var hotelName = hotel.name;
```

└──────────┘
OBJECT



```
var hotelName = hotel.name;
```



PROPERTY




```
var hotelName = hotel[ 'name' ];
```



```
var hotelName = hotel[ 'name' ];
```

OBJECT



```
var hotelName = hotel['name'];
```

PROPERTY



UPDATING OBJECTS



```
hotel.name = 'Park';
```



```
hotel.name = 'Park';
```



OBJECT



```
hotel.name = 'Park';
```


PROPERTY



```
hotel.name = 'Park';
```

NEW VALUE




```
hotel[ 'name' ] = 'Park' ;
```



```
hotel[ 'name' ] = 'Park' ;
```

└──────────┘
OBJECT



```
hotel[ 'name' ] = 'Park' ;
```

PROPERTY



```
hotel[ 'name' ] = 'Park';
```

NEW VALUE



MANY OBJECTS



OBJECT CONSTRUCTOR

```
function Hotels(name, rooms, booked) {  
  this.name: name,  
  this.rooms: room,  
  this.booked: booked,  
  checkAvailability: function() {  
    return this.rooms - this.booked;  
  }  
};
```



```
var parkHotel = new Hotels('Park', 67, 39);  
var queensHotel = new Hotels('Queens', 40, 24);  
var jerseyHotel = new Hotels('Jersey', 45, 18);
```



BUILT-IN OBJECTS



1

Browser Object Model

THE WEB BROWSER



BROWSER OBJECT MODEL

PROPERTIES INCLUDE:

`window.innerHeight`

`window.innerWidth`

`window.screenX`

`window.screenY`

METHODS INCLUDE:

`window.print()`



1

Browser
Object Model

THE WEB BROWSER

2

Document
Object Model

THE PAGE LOADED IN
THE WEB BROWSER
(OR TAB)



DOCUMENT OBJECT MODEL

PROPERTIES INCLUDE:

`document.title`

`document.lastModified`

METHODS INCLUDE:

`document.write()`

`document.getElementById()`



1

Browser
Object Model

THE WEB BROWSER

2

Document
Object Model

THE PAGE LOADED IN
THE WEB BROWSER
(OR TAB)

3

Global
JavaScript
Objects

GENERAL PURPOSE
OBJECTS JAVASCRIPT
NEEDS TO WORK



GLOBAL JAVASCRIPT OBJECTS

PROPERTIES INCLUDE:

```
saying.length
```

METHODS INCLUDE:

```
saying.toUpperCase()
```

```
saying.toLowerCase()
```

```
saying.charAt(3)
```



In Class/Homework

Pick a product on Kickstarter and create a simple product webpage. This page should use the JavaScript object literal syntax for all the properties of this product use JavaScript to display all the products properties on the webpage.

The properties should include the **name**, **price**, **description**, **image**, **discount (two week expiration)**, and **price with discount**.

Hint: To calculate the expiration date, create a function that uses today's date to calculate the expiration date. Use the date object.

Extra credit: Display all the pledge amounts and rewards.

