# Course: JavaScript Programming – Introduction

## High-level objectives:

1. Understanding what JavaScript is and why is such an important language to learn;
2. Learn how to use your favourite Text Editor to write JavaScript programs;
3. Understand the main coding techniques and learn how to use them effectively;
4. Develop your own dynamic web pages using JavaScript language

## Content:

### History of JavaScript:

Where does it fit in the Web Development landscape and what are the benefits of learning the it.

### What can I do with JavaScript?

* Put content in a HTML page on the fly;
* Make Webpages Responsive;
* Detect a User Browser and other Info;
* Create Cookies;
* Validate Forms;
* Create animations, slideshows, scrollers, etc;
* Build apps with JavaScript Frameworks (AngularJS, ReactJS, BackboneJS, etc);
* Understand which editors are most popular in the development community

### Learn how to combine JavaScript code into HTML pages (pros and cons)

Add content

Language Fundamentals:

* What are Variables;
* Most common Data Types;
* What are Arrays and why to use them;
* Learn how to Loops;
* Conditionals;
* Comparisons;
* Using and calling Objects;
* Program Flow, Events;
* What are Forms and learn how to validate them

Object Oriented (OO):

* Intro to Object Oriented Programming;
* Properties;
* Methods

## Putting your knowledge into practice:

But before that… setup your project files:

* Create a blank HMTL5, CSS and JavaScript project files
* Link them up
* In the JavaScript file write the following:

console.log("I wanna play a game: it’s called ‘Can you handle Mr. Reboot’s Code Challenge?’");

* Test it, make sure that your browser’s console displays the message above.

Once up a time………

On May 9th, 2015, fSociety was able to take down both EvilCorp's servers and backups, crippling them hard. Although that attack was successful, fSociety quickly realized that the plan wasn't pitch-perfect. EvilCorp is recovering at a speedy rate and the 99% are still not free as intended.

Now that you're a part of fSociety, there's a new challenge: To destroy all EvilCorp's physical data records (aka a fucking tonload of paper).

But first let's start by setting you up with fSociety's fantabulous scrum mistress.   
  
With Elliot AFK, someone has to be Darlene's right arm. She trusted you with fSociety's IRC Server. Setup your IRC client to connect.

### <Hacking Task> #1

// To connect to IRC, declare a new variable, assign your hacker alias to it and

// show us a message with both your hacker alias and the ircConnectedMessage.

var ircConnectedMessage = ' has connected to [irc.colo-solutions.net](http://irc.colo-solutions.net/)';

Great choice on your hacker alias! Now join fSociety's channel and start keeping track of Elliot's sentence time...

### <Hacking Task> #2

// To solve this next task, you first have to declare a new variable and assign your new password to it.

// If your password size is higher than minimumPasswordSizeForASecureLine, show 'You're now in a secure line.' and set the variable

// secureLine to true. Otherwise you should show 'You're not in a secure line. FBI might get a hold of you...'.

// No matter what, you should also show us that you've joined the channel by printing

// the variable ircChannelJoinedMessage.

// Increase your currentDay by the value of taskTwoDuration.

// If Elliot hasn't finished serving his time in jail, you should show what's the currentDay and

// how many days are left in his sentence. Otherwise, show the amount of days he spent in jail.

var secureLine = false;

var ircChannelJoinedMessage = 'You joined #th3g3ntl3man';

var currentDay = 0;

var taskTwoDuration = 10;

var elliotSentenceTime = 100;

var minimumPasswordSizeForASecureLine = 10;

Mad congratz! You're establishing yourself as a trusty member of fSociety by the day. And that, if I may say so, ain't no easy thing to do.   
  
In Elliot's own words: Hackers inherently trust no one. Including themselves.  
  
Can you get him to trust you and let you in on the plan?

### <Hacking Task> #3

// You'll have to connect to IRC every day until you find Elliot online.

// Every time you check if Elliot is online, increase currentDay by one.

// When you finally find him, you gotta ask what's the plan.

// When currentDay is equal to dayElliotIsOnline, print

// 'Finally... Can you tell me what the fuck is Stage 2?' and set the elliotOnline variable to true.

// But beware of the FBI, for they're on the lookout: if you talk to Elliot without a secure line his

// sentence will increase by 30 days.

// If Elliot hasn't finished serving his time in jail, you should log in the console what's the currentDay and

// how many days are left in his sentence. Otherwise, show the amount of days he spent in jail.

var dayElliotIsOnline = 20;

var elliotOnline = false;

//note: before processing with this exercise, you’ll need to change your program so that it checks if you are connected and have joined IRC. Otherwise, display a warning console message to the user and stop the program.

Also, depending on how you’ve built your code in the first place, you may need to do a little bit of refactoring so that it works as expected (possibly some variables and/or the overall flow).

You heard about Ray, right?! That dude that is running a Silk-Road-style Darknet marketplace... Ok. That same Ray asked for Elliot's help to stop the attacks on his site. But more important than the help itself, was utmost discretion while doing so. Disregarding Ray's confidentiality request, Elliot looked where "he shouldn't" and, as story goes, curiosity killed the cat (i.e. Elliot was beaten up by Ray). Now Elliot is trying to get revenge by taking down Ray's market.   
  
Unfortunately, he's currently in jail and therefore unable to do so without your help. He has sent you some possible passwords for Ray's market administrator account but you still have some work to do. Challenge accepted?

<Hacking Task> #4\_

// Find the smallest password in posibleRaysPasswords array and print it like the example below.

// e.g: femtocell

// f

// fe

// fem

// femt

// femto

// femtoc

// femtoce

// femtocel

// femtocell

// Reduce 40 days of Elliot's sentence time and increase your currentDay by the value of taskFourDuration.

// If Elliot hasn't finished serving his time in jail, you should show what's the currentDay and

// how many days are left in his sentence. Otherwise, show the amount of days he spent in jail.

var taskFourDuration = 15;

var possibleRaysPasswords = [

'mobleyAndTrentonAreDead',

'tyrellIsElliot',

'dreadPirateRoberts'

];

Ups! You've succeded on the hack but left a freaking trail behind... And that allowed the Bureau to trace you back to fSociety's HQ, aka Madame Executioner's place. You guys really shat the bed this time, haven't you?  
  
To fix this, Elliot managed to get access to the database that connects fSociety to the 5/9 attacks. He just PM'd you the details.   
  
Erase all of fSociety's entries from the FBI's database. Do it fast. Do it clean. Don't fuck up again.

<Final Hacking Task>

// You're given two arrays: one that holds every member of fSociety and another one

// that holds every possible suspect of the 5/9 attacks.

// Replace every fSociety member from the Bureau list with something of your taste.

// Show the new Bureau list to confirm that you've erased all the names.

// Increase the currentDay by the value of finalTaskDuration.

// If Elliot hasn't finished serving his time in jail, you should show what's the currentDay and

// how many days are left in his sentence. Otherwise, show the amount of days he spent in jail.

var finalTaskDuration = 20;

var fSocietyMembersAlias = [

'Mr. Robot',

'DoloresH4ze',

'samsepi0l',

'Mobley',

'Trenton'

];

var bureauList = [

'Trenton',

'Phillip Price',

'DoloresH4ze',

'Terry Colby',

'Tyrell Wellick',

'samsepi0l',

'Cisco',

'Mobley',

'Whiterose'

];

Ready to complete your <Hacking Tasks>?! Press [repl.it](https://repl.it/) and may the Holy Lord of JavaScript be with you ‘cause (only) In Good Code We Trust.

