

National University of Singapore
School of Computing
CS1101S: Programming Methodology (JavaScript)
Semester I, 2012/2013

Mission 1
Understanding the Force

Start date: 17 August 2012

Due: 18 August 2012, 23:59

Readings:

- Textbook Sections 1.1.1 to 1.1.4

Every year, the Temple of JFDI holds a trial to find worthy candidates and train them in the Way of the Force as well as to prepare them for a lifelong journey of bringing peace and justice throughout the galaxy.

After years of waiting in anticipation, it is finally your turn to enter. The instructors will give you some basic training before you are tested with a set of challenges. If you pass these challenges, you will be initiated into the academy.

This mission consists of only **one** task.

Setting up Mozilla Firefox

The instructors use JavaScript to teach the way of the Force. JavaScript is a powerful language that is supported by many platforms and supports many uses. For the purposes of this course, we will be using one of the most common environments in which JavaScript is used: the web browser. Particularly, we will be using Mozilla Firefox 14.0.1, which you can download from <http://www.mozilla.org/en-US/firefox/all.html>. Although you may choose to use other versions of Firefox, or even other browsers entirely, we cannot guarantee that the behaviour of the JavaScript libraries we will be providing you and of the code that you yourselves will write will run properly and consistently in other environments.

For most of the programming activities that you will carry out, a set of JavaScript source files will be given to you, along with an HTML file that will serve as a launcher for the program. Firefox also provides an interactive Web Console, accessible via the Tools menu, under Web Developer, that you can use to experiment with JavaScript code.

Setting up Komodo Edit

To write and modify JavaScript, you will need a text editor. Unlike the browser you choose, text editors will have no effect on how JavaScript will run, so you may freely decide on any program that can make changes to text files and save those changes. The JFDI recommends the use of Komodo Edit, which can be found at <http://www.activestate.com/komodo-edit>.

Task 1:

In this mission, you need to demonstrate your ability to comprehend the basics of JavaScript, to prove that you will be unfazed by the challenges that lie ahead.

This is meant as an easy exercise with the purpose of familiarizing you with the basics of JavaScript. You have been given the following JavaScript statements. You are to evaluate each statement in the given sequence.

For each statement (some statements are multi-line):

- Write down briefly, in its multi-line comment section in the JavaScript file provided, what you expect the statements to **return** when evaluated, if they are evaluated sequentially as listed (i.e. Code in previous lines affect subsequent lines). If you do not expect a return value you may write "undefined" and if you expect an error, you may write "error".
- Copy the statement into Firefox's Web Console and then execute it.
- If any expression has evaluated differently from your expected answer, write down what it evaluated to in a new line **below** your expected answer. **Please note that you will be graded only on your final answer. (If you have no corrections to make, your initial answer will be your final answer)**

```
42;

0000;

"the force!";

6 * 9;

"2 + 3";

1 / 0;

var red = 44;

var green = 43;

red - green;

var blue = green;

var purple = blue + green;

green(5);

(function(x, y, z){ return x; });

(function(x, y){ return x + y; })(4, 3 + 4);

(function(wow, it, works){ return wow(it, works); })
(function(a, b){ return a - b; }, 7, 5);

(function(wow, it, works){ return works(wow, it); })
(5, 7, function(a, b){ return a - b; });
```

```
var x = 2;
(function(x){ return x + x; })(5);

(function(rune){ return rune * rune; })(5);

rune;
```

Task Files

- **mission_1.1.js**

If you still have doubts over how some expressions are evaluated, please indicate them in the comment area provided.

Submission

To submit your work to the Academy, copy the contents from the template file(s) into the box that says "Your submission" on the mission page, click "Save Code", then click "Finalize Submission". Note that submission is final and that any mistakes in submission requires extra effort from a tutor or the lecturer himself to fix.