# World Wide Web and Mobile Applications CSC 130 - Lab B01 and B02

## Teaching Team

Department of Computer Science University of Victoria

Lab 08 and Lab 09



## Admin

## Lab 08 - Restful API

- Part 01 A RESTFUL Web Service GET Request
- Part 02 Handling the JSON Returned
- Part 03 Creating Images Out of the Movie Rating
- Bonus Add ALT Text to MPAA Standard Rating Image

## Lab 09 - JSON and Babylon.js

- Part 01 Data Models and JSON
- Part 02 Babylon.js
- Part 03 GitHub
- Bonus Upload Project 01 and/or Project 02 Code to GitHub

## Finished



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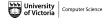


Summer 2023

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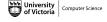
All CSC 130 TA Lab Notes:

https://notes.dominiquecharlebois.com/ta/csc130.html



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- Lab 08 and Lab 09 are due at the end of the lab today.
- Lab Material: Brightspace CSC 130 Course Content Day 10: Lab 8! and Lab 9!
- Checkpoints are optional, thus feel free to work at your own pace and demonstrate your work at the end.
- Ask Questions! Answer Questions! Collaborate with Peers!
- **Resource**: https://developer.mozilla.org/en-US/



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Credit is awarded by demonstrating your work at the end of each lab:

- Students who complete all required material will obtain 3/4.
- Students who complete bonus material *AND* collaborate with peers will obtain 4/4.

You are expected to collaborate with peers by asking and answering questions.



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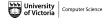
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## Lab 08 - Overview

# **Objectives**

- Understand how to make a get request to a RESTFUL web services.
- More practice working with JSON objects References/Resources.
- Translation between JavaScript and jQuery.



## Lab 08 - Resources

## **Examples**

Open Movie Database API: https://jsfiddle.net/ycoady/4en790k3/24/

## Resources

- https://developer.mozilla.org/en-US/docs/Web/ JavaScript/Guide/Working\_with\_Objects
- https://developer.mozilla.org/en-us/docs/Web/API/
  Document\_Object\_Model
- https://www.w3schools.com/jquery/jquery\_get\_started.asp
- https://www.w3schools.com/js/js\_jquery\_selectors.asp

# Lab 08 - Starter Files

#### Starter Files

- Download the ZIP folder named lab8-starter within a folder named csc130.
- Unzip the folder named lab8-starter.

The folder named **lab8-starter** contains one HTML file, one CSS file, one JS file.

## Lab 08 - Part 01a

#### Check Point 01a

- Open up the lab8.html file in a text editor.
- Add the references to the JS and CSS files, and a link to jQuery into the HEAD section.
- Open up the lab8.html in a web browser. Verify that everything is connected correctly.
- Open up lab8.js in a text editor.

#### Resources:

https://www.redhat.com/en/topics/api/what-is-a-rest-api



# Lab 08 - Part 01b

#### Check Point 01b

- Create an account with Open Movie Database: http://www.omdbapi.com/apikey.aspx.
- Use the RESTFUL API example to get the information from the user and then retrieve the data from Open Movie Database.

Hint: http://www.omdbapi.com/?apikey=[yourKey]&t=
[movieTitle]&y=[movieYear]
where [yourKey] will be replaced by your key from the Open Movie
Database (e.g., http://www.omdbapi.com/?apikey=01234).

Resources: https://jsfiddle.net/ycoady/4en790k3/24/ and http://www.omdbapi.com/



# Lab 08 - Part 01c

## Check Point 01c

■ Complete the *submit()* function in th file named **lab8.js**.

## Lab 08 - Part 02

## Check Point 02

- Complete the *displayResults()* function in th file named **lab8.js**.
- Determine which attributes in the JSON data we need to access.
- Add the data dynamically to the HTML file with JavaScript.

# Lab 08 - Part 03

## Check Point 03

- Use the MPAA standard ratings with the corresponding MPAA standard image to add movie ratings to our displayed results (e.g., G, PG-13, R, M, etc.).
- Add the JavaScript variables (g, pg, pg13, r, and unrated) with the appropriate URL.
- Using the movie rating of the movie, display one of these MPAA standard rating images in addition to the text.

**Hint**: You will need to use if-statements to conditionally render the content based on the rating.



# Lab 08 - Bonus Check Point

#### **Bonus Check Point**

- Add the alt attribute to the MPAA standard images.
- Set the alt text to correspond with the MPAA standard rating (i.e., A
   G rating will have General Audience as the alt text).

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# Lab 09 - Overview

# **Objectives**

- Practice thinking about JSON, arrays, and loops.
- Introduction to 3D using Babylon.js.
- Become familiar with GitHub and Repositories.



## Lab 09 - Part 01a

#### Check Point 01a

■ Explore the type of *data model* you will use in Project 02 (i.e., how many objects in the array, stored values, names of attributes in the objects).

Resources: https://www.imdb.com/interfaces/ or https://bookshelf.erwin.com/bookshelf/public\_html/2021R1/Content/References/Data%20Modeling%20Overview/Data%20Model%20Example.html

## Lab 09 - Part 01b

#### Check Point 01b

- Create a design of your data model for your Project 2 (i.e., a hand drawn sketch, or list of formatted data elements).
- Demonstrate your mocked up JSON object.

*Note*: The JSON object can be from a server, but it does not have to be from a server.

# Lab 09 - Part 02

#### Check Point 02

- Create your first Babylon.js app, as described in the tutorial.
- Modify Playground 5 from the tutorial (e.g., modify the colour, texture, yeti, etc.).
- Demonstrate your modified *Playground 5*.

**Tutorial**: https://doc.babylonjs.com/journey/theFirstStep#everyones-very-first-step

## Lab 09 - Part 03

## **Check Point 03**

- Create the GitHub Repository for the Babylon.js Application.
- Upload the Babylon.js code to the GitHub Repository.

# Lab 09 - Bonus Check Point

#### **Bonus Check Point**

■ Upload Project 01 and/or Project 02 to GitHub.



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## Finished



# Lab 08 and Lab 09

Lab 08 and Lab 09 are Finished!

# Final Steps

- Upload files to Brightspace.
- Add link to text field in Brightspace submission.