Lab Activity 3

APIs and JSON

Objective

Become comfortable with Internet communication in Scala using JSON and reading documentation

Overview

In this activity you will connect to 2 different web APIs each returning a JSON string. You'll parse this string and extract a certain piece of data as a Scala type. To accomplish this you can use the two libraries mentioned in Fiday's lecture

1. Play JSON
2. scalaj-http

If you'd prefer you may use any other libraries/methods to complete this activity.

After you complete the activity you should the remaining time in lab to work on your project and prepare for the demo next week.

You will need to use [URL encoding](#) in your API requests. Most importantly, encode the space character as "%20" when used in a url.

Part 1: Retrieving Data from the OMDb API (20 Points)

API: http://www.omdbapi.com/

Read the documentation for this API to learn how it is used. Note that the instructions in this document are intentionally vague. You should read through the documentation of the API to be able to accomplish your goals without step-by-step instructions. Note that you will need to obtain an API key to use the API.

Write a Scala program that will extract the release date (day, month, and year) of a movie and print it on the screen. The release date must be printed on it's own, do not just print the entire JSON string that contains it.

Verification: When you complete this part, verify the functionality with a TA. The TA will give you a movie title and your program must print only the release date for that movie to the screen.

Part 2: Retrieving Data from an API of Your Choice (30 Points)

Choose any web API you'd like that returns a JSON string (most web APIs return JSON strings), extract a single value from a response of the API, and display this value to the screen.

To find ideas for an API try finding one in this list: https://github.com/toddmotto/public-apis

Verification: When you're finished with this part demo to a TA your program and show that it:

1. Connects to an API of your choosing (Not the OMDb API)
2. Parses the returned JSON string to extract a single value
3. Uses this data to accomplish something (Printing it ot the screen is fine)