

## 1.1 Exercise Walkthrough: Get Data Using URLs

Universal Resource Locations, or URLs as we commonly know them, are used all over the digital landscape to store and retrieve data of all kinds. Understanding how to access these as not only websites but also data stores is vitally important for our journey to the cloud.

**Step 1:** In this exercise you will learn how to get the data from a website and store the data locally in your browser. The following URL will display the data in the JSON (JavaScript Object Notation) format. JSON is a type of data representation that helps you layout the data in a way that browsers can understand.

Open your browser and click on the following link. Notice the JSON representation of the data.

<https://pollysnips.s3.amazonaws.com/users.json>.

To learn more about JSON and its properties, you can check out the following link:

[https://www.w3schools.com/whatis/whatis\\_json.asp](https://www.w3schools.com/whatis/whatis_json.asp)

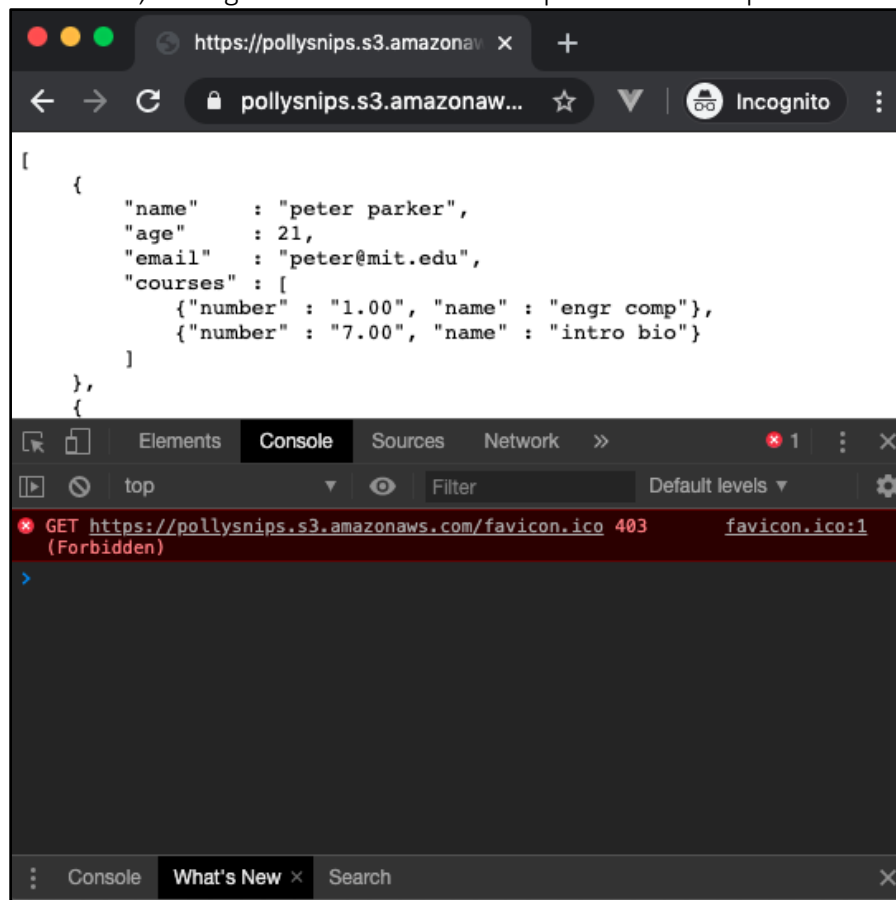
**Step 2:** Copy the entire data you see on the page.

```
[
  {
    "name" : "peter parker",
    "age" : 21,
    "email" : "peter@mit.edu",
    "courses" : [
      {"number" : "1.00", "name" : "enr comp"},
      {"number" : "7.00", "name" : "intro bio"}
    ]
  },
  {
    "name" : "bruce wayne",
    "age" : 32,
    "email" : "bruce@mit.edu",
    "courses" : [
      {"number" : "2.00", "name" : "intro ME"},
      {"number" : "3.00", "name" : "intro MS"}
    ]
  },
  {
    "name" : "diana prince",
    "age" : 25,
    "email" : "diana@mit.edu",
    "courses" : [
      {"number" : "4.00", "name" : "intro arch"},
      {"number" : "5.00", "name" : "intro chem"}
    ]
  }
]
```

```
]
}
]
```

**Step 3:** Open up the console window in your browser. If you use chrome, you can do so by using the shortcut Option + ⌘ (Command) + J (on macOS), or Shift + CTRL + J (on Windows/Linux).

Alternatively, you can do right click on the window and click on 'Inspect'. Once the developer tool box opens, click on the 'Console' tab. For other browsers, use right click and look for 'Inspect Element' option.



**Step 4:** In the Console window, type:

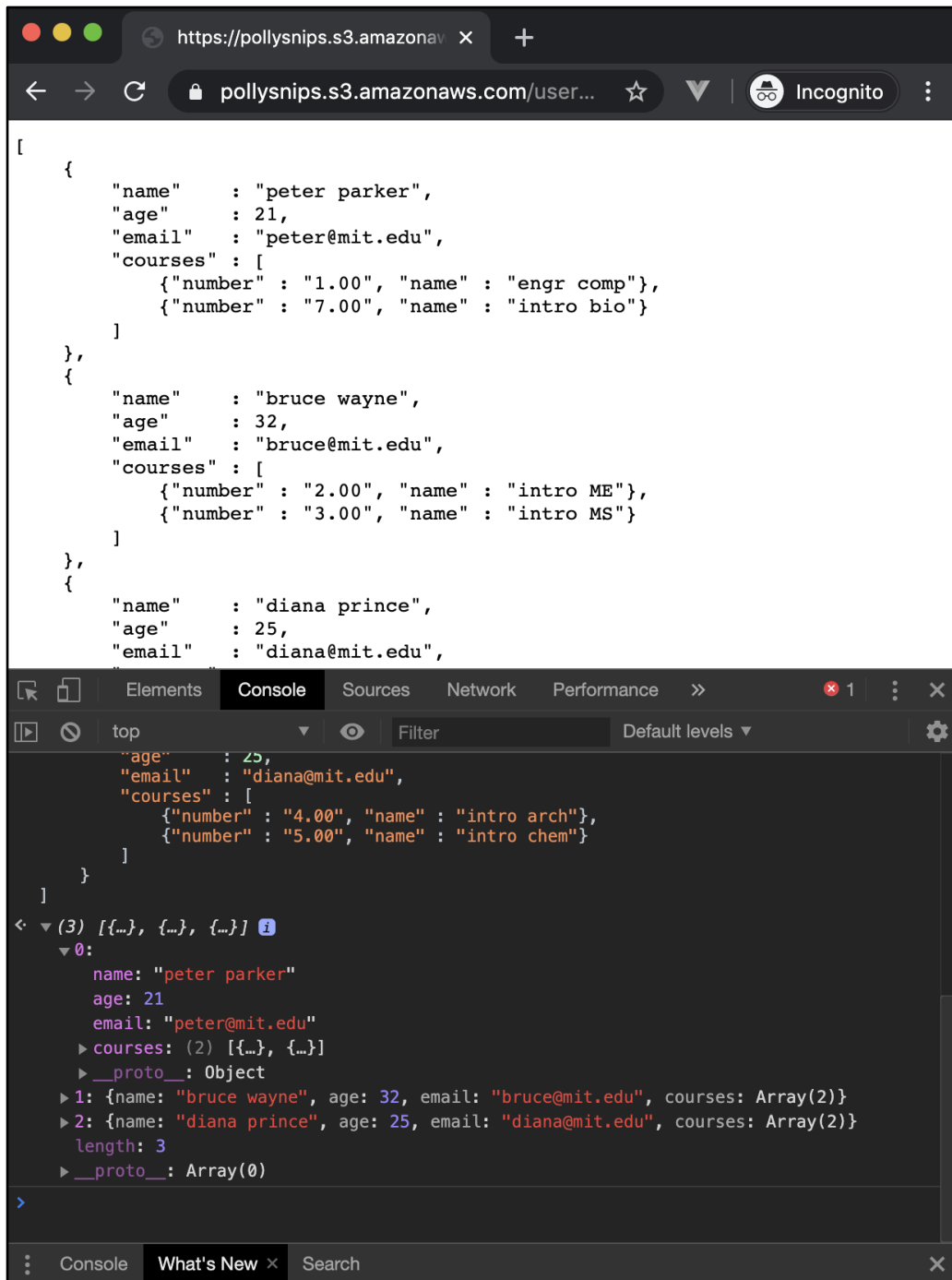
**mydata** = *'cut paste the data here, it will be a large object'*

This will store the data in your browser locally, giving you the ability to modify the data and change it within your browser. You can expand and click on any of the values and modify it You can alternatively call for explicit values from the entire data.

For example type:

**mydata[0]**

In the console and press enter. This will show all values and arrays belonging to the first object in the data.



The screenshot shows a web browser window displaying a JSON array of three objects. The first object represents Peter Parker, the second Bruce Wayne, and the third Diana Prince. Each object contains fields for name, age, email, and a list of courses. The browser's developer tools are open, showing the console with the same data structure, highlighting the first object's details.

```
[
  {
    "name": "peter parker",
    "age": 21,
    "email": "peter@mit.edu",
    "courses": [
      { "number": "1.00", "name": "enr comp" },
      { "number": "7.00", "name": "intro bio" }
    ]
  },
  {
    "name": "bruce wayne",
    "age": 32,
    "email": "bruce@mit.edu",
    "courses": [
      { "number": "2.00", "name": "intro ME" },
      { "number": "3.00", "name": "intro MS" }
    ]
  },
  {
    "name": "diana prince",
    "age": 25,
    "email": "diana@mit.edu",
    "courses": [
      { "number": "4.00", "name": "intro arch" },
      { "number": "5.00", "name": "intro chem" }
    ]
  }
]
```

Console output (expanded):

```
(3) [{...}, {...}, {...}]
  0: {name: "peter parker", age: 21, email: "peter@mit.edu", courses: (2) [...], __proto__: Object}
  1: {name: "bruce wayne", age: 32, email: "bruce@mit.edu", courses: Array(2)}
  2: {name: "diana prince", age: 25, email: "diana@mit.edu", courses: Array(2)}
  length: 3
  __proto__: Array(0)
```

If you wish to learn more about arrays and objects, then we recommend going through the MDN documentation:

[https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global\\_Objects/Array](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Array)