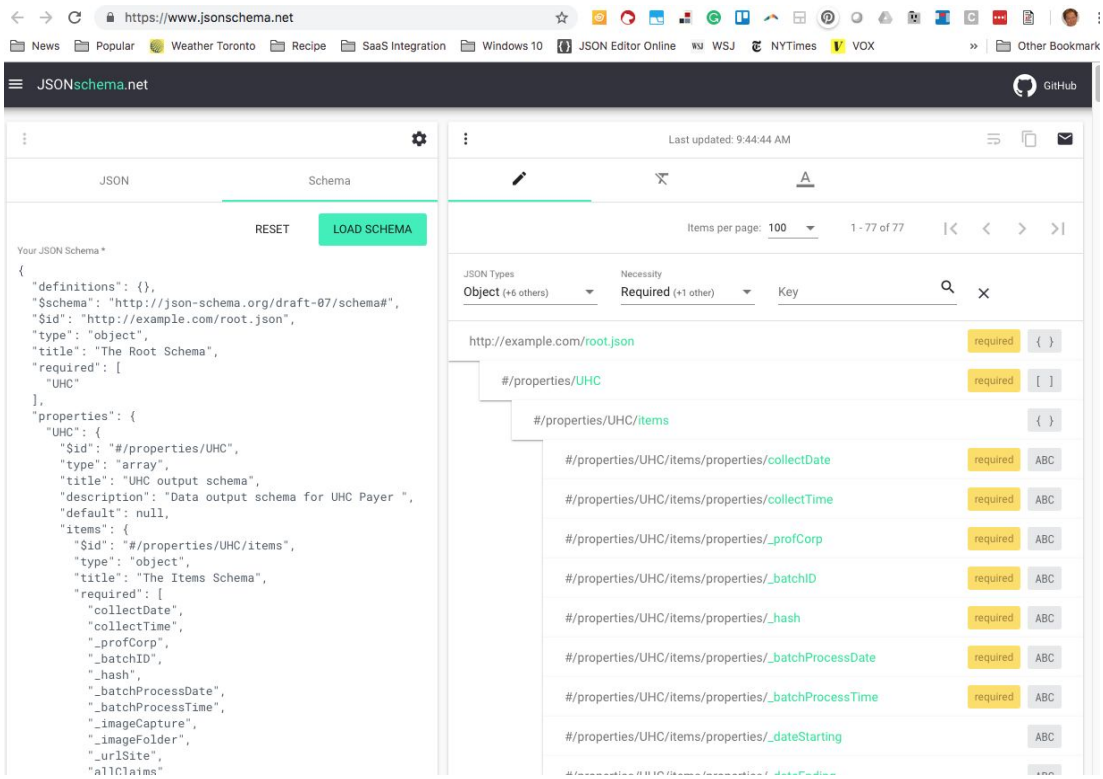
Primer on JSON Schema

Why JSON Schema?

1. Specifying the JSON data structure

Using a spreadsheet to define the JSON structure was too cumbersome. JSON Schema is a better approach since it is designed to be human readable. There are also tools that can take the JSON schema and make it even easier to read and edit.

For example, this the JSON Schema editor I used: https://www.jsonschema.net/



2. Automating the validation of JSON data

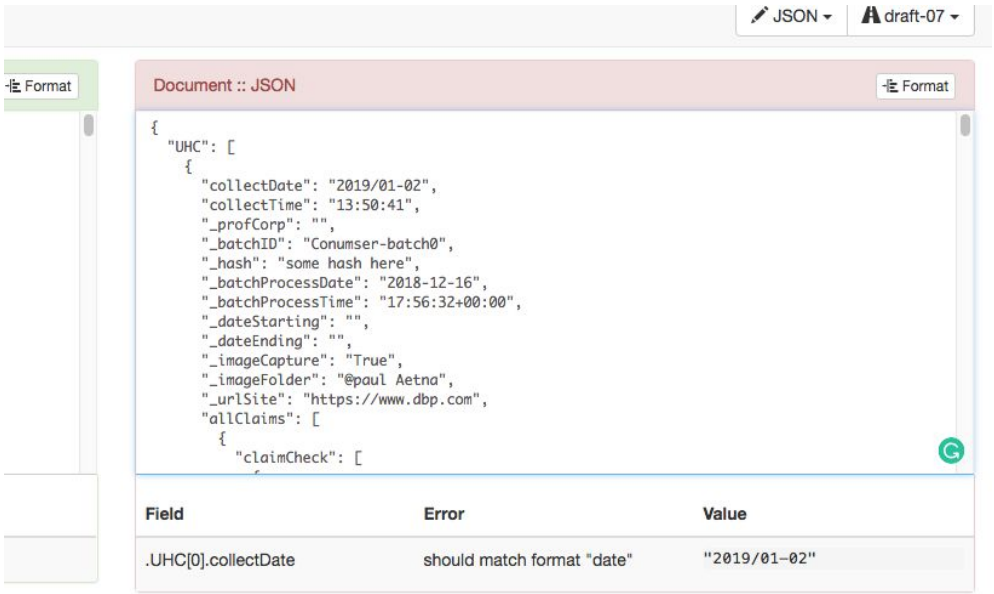
The structures of our various JSON data are getting more complicated and constantly evolving. Checking the JSON structure manually is just too time consuming and error prone.

Since JSON Schema is an open standard with lots support from the open source community, it is a good technology for what we need now.

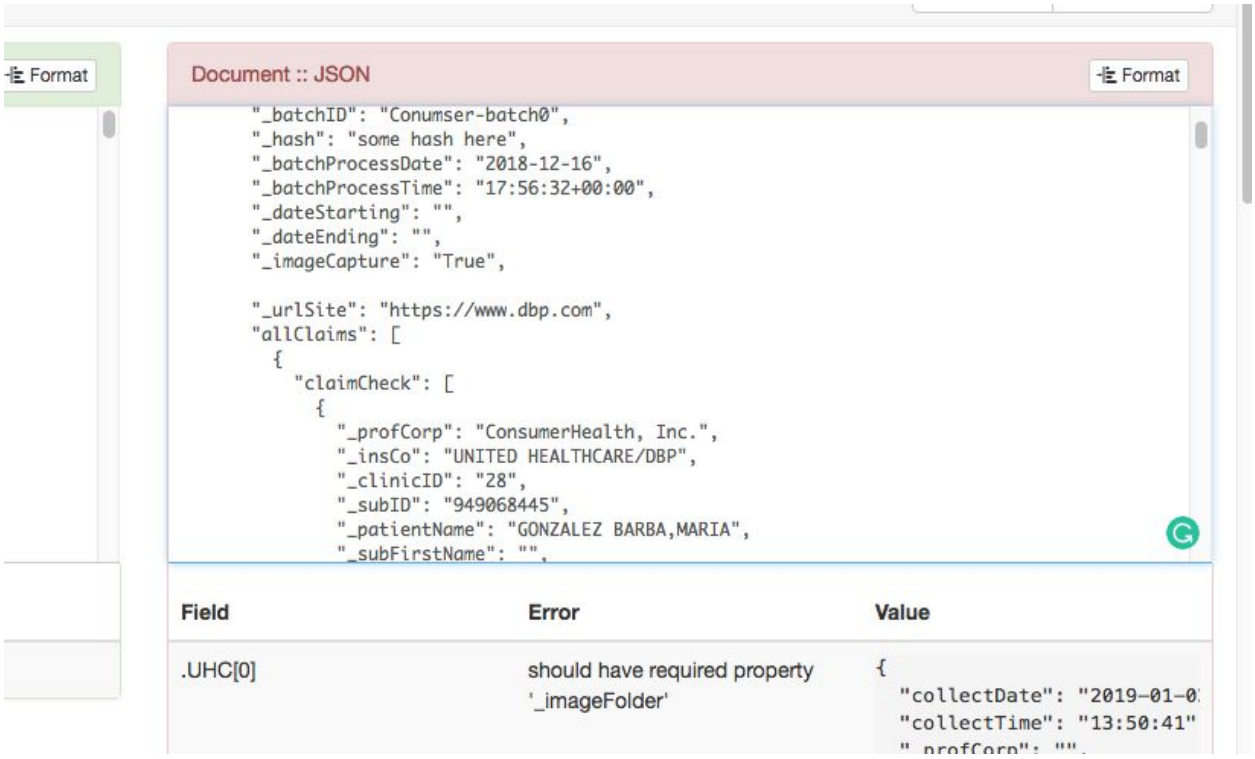
Once the schema is defined, you can use a validator to validate the JSON data using tools such as https://jsonschemalint.com

Below is a screen shot of the validator.

Below is a validation example, the validator detects an incorrect date formatting issue



Below is a validation example where a required field is missing



3. Speed up development cycle

We want to enable each developer to able to test and iterate their own code as quickly as possible. Json Schema allows each developer to independently checking their own JSON data structures without depending on other team members.

4. Ease integration with our automated collection process

By ensuring a standard interface, we are able to more easily integrate the collectors developed into our system.

Other resources

https://json-schema.org/

https://json-schema.org/implementations.html