

Bankend: python

REST/HTTP/RPC: node.js / Flask

[GET]

```
# construct a API Response object
    • get_response()
# load address formats from a file
    • load_formats()
# verify that the provided address matches the format of the country provided
    • verify_address(address, country_code)
# allow the user to read address formats, and provide accessibility for frontend
    • GetFormats(Resource)
# allow the user to retrieve all stored addresses:
    • responses={200: "Success", 400: "Invalid request format"}}
# allow user get a specific address based upon the identifier
    • AddressById(Resource):
        responses(200: "Success", 400: "Error: No request body")
# allow the user to search based on a country specific format
    • GetByCountry()
        responses(200: "Success", 400: "Error: Country is not currently handled by this API.")
# allow Normalize
```

[PUT]

- `response(400, {"error": "Address has not yet been created."})`

Database: MySQL/mongoDB,

Resource of Data:

<http://s3.amazonaws.com/data.openaddresses.io/openaddr-collected-global.zip>

[445 folders! All countries, all styles, each folder has flat files for each]

Example of .CSV file

[illegible]

```

CREATE DATABASE worldAddress;
USE worldAddress;
CREATE TABLE `worldAddress_db` (
  `id` INT(10) UNSIGNED,
  `country_id` INT(10) UNSIGNED,
  `country_Hash` INT(16) UNSIGNED
  `country_ISO` CHAR(2),
  `country_name` VARCHAR(64),
  `city_name` VARCHAR(128),
  `street_name` VARCHAR(128),
  `region_number` VARCHAR(128),
  `district` VARCHAR(128),
  `number` INT(10),
  `latitude` DOUBLE,
  `longitude` DOUBLE,
  `post_code` VARCHAR(30),
  `time_zone` VARCHAR(8),
  INDEX `idx_id` (`id`),
  INDEX `idx_country_id` (`country_id`)
) ENGINE=MyISAM DEFAULT CHARSET=utf8 COLLATE=utf8_bin;

```

Metadata: JSON

Structure JSON for Country:

Cached and Stored user input.

Address.json:

```

{
  "AM":{
    "name": "Armenia",
    "format": {
      "Address1": "",
      "Address2": "",
      "City": "",
      "State": "",
      "ZipCode": ""
    }
  },
  "US": {
    "name": "United States",
    "format": {
      "Address1": "",
      "Address2": "",
      "City": "^[a-zA-Z]+(?:[\\s-][a-zA-Z]+)*$",
      "State": {
        "AL": "Alabama",
        "AK": "Alaska",
        "AZ": "Arizona",
        "AR": "Arkansas",
        "CA": "California",
        "CO": "Colorado",
        "CT": "Connecticut",

```

```

    "DE": "Delaware",
    "FL": "Florida",
    "GA": "Georgia",
    "HI": "Hawaii",
    "ID": "Idaho",
    "IL": "Illinois",
    "IN": "Indiana",
    "IA": "Iowa",
    "KS": "Kansas",
    "KY": "Kentucky",
    "LA": "Louisiana",
    "ME": "Maine",
    "MD": "Maryland",
    "MA": "Massachusetts",
    "MI": "Michigan",
    "MN": "Minnesota",
    "MS": "Mississippi",
    "MO": "Missouri",
    "MT": "Montana",
    "NE": "Nebraska",
    "NV": "Nevada",
    "NH": "New Hampshire",
    "NJ": "New Jersey",
    "NM": "New Mexico",
    "NY": "New York",
    "NC": "North Carolina",
    "ND": "North Dakota",
    "OH": "Ohio",
    "OK": "Oklahoma",
    "OR": "Oregon",
    "PA": "Pennsylvania",
    "RI": "Rhode Island",
    "SC": "South Carolina",
    "SD": "South Dakota",
    "TN": "Tennessee",
    "TX": "Texas",
    "UT": "Utah",
    "VT": "Vermont",
    "VA": "Virginia",
    "WA": "Washington",
    "WV": "West Virginia",
    "WI": "Wisconsin",
    "WY": "Wyoming"
  },
  "ZipCode": "^\\d{5}$"
}
},
}

```

Structure JSON for address search
Address2.json

```
{
  "label": "Country",
  "options": [
    {
      "label": "Afghanistan",
      "iso": "AF",
      "fields": [
        {
          "thoroughfare": {
            "label": "Address 1"
          }
        },
        {
          "premise": {
            "label": "Address 2"
          }
        },
        {
          "locality": [
            {
              "localityname": {
                "label": "City"
              }
            },
            {
              "postalcode": {
                "label": "Postal code",
                "format": "^\\d{4}$",
                "eg": "1001"
              }
            }
          ]
        }
      ]
    },
    {
      "label": "Aland Islands",
      "iso": "AX",
      "fields": [
        {
          "thoroughfare": {
            "label": "Address 1"
          }
        },
        {
          "premise": {
            "label": "Address 2"
          }
        },
        {
          "locality": [
            {
              "localityname": {
                "label": "City"
              }
            },
            {
              "postalcode": {
                "label": "Postal code",
                "format": "^22\\d{3}$",
                "eg": "22150"
              }
            }
          ]
        }
      ]
    }
  ]
}
```

```
}  
}
```

FrontEnd: php for webserver pages, html, CSS, Javascript.

Dynamic Form

X

SEARCH

65145
Malang, East Java, Indonesia

65129
Malang, East Java, Indonesia

65144
Malang, East Java, Indonesia

65146
Malang, East Java, Indonesia

65151
Malang, East Java, Indonesia