How to Call Phylotastic Web Services

Language: Ruby

GET Method:

#Template of a Ruby client to call web services using HTTP GET (*service_client_get.rb*)

require 'net/http'

```ruby
def call_service(input_parameter1, input_parameter2 )

    uri = URI('http://hostname/servicepath/servicename')

    params = { :parameter1_name => input_parameter1, parameter2_name =>input_parameter2}

    uri.query = URI.encode_www_form(params)

    response = Net::HTTP.get_response(uri)

    response_body = response.body if response.is_a?(Net::HTTPSuccess)

    #display the response from the web service
    puts response_body

end

if __FILE__ == $0
        call_service(parameter1_value, parameter2_value)
end
```

Example: (*Call a service to get all Species from a Taxon filtered by country*)

require 'net/http'

```ruby
def call_service(param1_val, param2_val)
    uri = URI('http://phylo.cs.nmsu.edu:5004/phylotastic_ws/ts/country_species')

    params = { :taxon => param1_val, :country => param2_val}

    uri.query = URI.encode_www_form(params)

    response = Net::HTTP.get_response(uri)
```

```ruby
    response_body = response.body if response.is_a?(Net::HTTPSuccess)

    puts response_body

end

if __FILE__ == $0
        call_service("Vulpes", "Nepal")
end
```

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POST Method:

#Template of a Ruby client to call web services using HTTP POST (*service_client_post.rb*)

```ruby
require 'net/http'
require 'json'
require 'uri'

def call_service(input_data)

    url = 'http://hostname/servicepath/servicename'

    uri = URI.parse(url)

    headers = {"Content-Type" => "application/json",  "Accept" => "application/json"}

    # Creates a http object
    http = Net::HTTP.new(uri.host, uri.port)

    response = http.post(uri.path, input_data.to_json, headers)

    #display the response from the web service
    puts response.body

end

if __FILE__ == $0
        input_data = {"key"=> value}
        call_service(input_data)
end
```

Example: (*Call a service to resolve scientific names with Open Tree TNRS*)

```ruby
require 'net/http'
require 'json'
require 'uri'
```

```ruby
def call_service(input_data)

    url = 'http://phylo.cs.nmsu.edu:5004/phylotastic_ws/tnrs/ot/names'

    uri = URI.parse(url)

    headers = {"Content-Type" => "application/json",  "Accept" => "application/json"}

    # Creates a http object
    http = Net::HTTP.new(uri.host, uri.port)

    response = http.post(uri.path, input_data.to_json, headers)

    #display the response from the web service
    puts response.body

end


if __FILE__ == $0
        input_data = {"scientificNames"=> ["Formica exsectoides", "Formica pecefica"]}
        call_service(input_data)
end
```

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Language: Python

GET Method:

#Template of a Python client to call web services using HTTP GET (*service_client_get.py*)

```python
import requests
import urllib

def call_service(inputData):
        url = "http://hostname/servicepath/servicename"

        headers = {'content-type': 'application/json'}

        encoded_data = urllib.urlencode(inputData)

        response = requests.get(url, params=encoded_data, headers=headers)

        if response.status_code == requests.codes.ok:
                print response.text
```

```
        else:
                print 'Error in response'

if __name__ == '__main__':

        inputData = {
                'parameter1Name': 'parameter1Value',
                'parameter2Name': 'parameter2Value'
        }

        call_service(inputData)
```

Example: (*Call a service to get all Species from a Taxon filtered by country*)

```
import requests
import urllib

def call_service(inputData):
        url = "http://phylo.cs.nmsu.edu:5004/phylotastic_ws/ts/country_species"

        headers = {'content-type': 'application/json'}

        encoded_data = urllib.urlencode(inputData)

        response = requests.get(url, params=encoded_data, headers=headers)

        if response.status_code == requests.codes.ok:
                print response.text
        else:
                print 'Error in response'

if __name__ == '__main__':

        inputData = {
                'taxon': 'Panthera',
                'country': 'Bangladesh'
        }

        call_service(inputData)
```

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POST Method:

#Template of a Python client to call web services using HTTP POST (*service_client_post.py*)

```python
import json
import requests

def call_service(inputData):

        url = "http://hostname/servicepath/servicename"
        headers = {'content-type': 'application/json'}

        json_inputdata = json.dumps(inputData)

        response = requests.post(url, data=json_inputdata, headers=headers)

        if response.status_code == requests.codes.ok:
                print response.text
        else:
                print 'Error in response'

if __name__ == '__main__':

        inputData = {
                'parameter1Name': 'parameter1Value',
                'parameter2Name': 'parameter2Value'
        }

        call_service(inputData)
```

Example: (*Call a service to resolve scientific names with Open Tree TNRS*)

```python
import json
import requests

def call_service(inputData):

        url = "http://phylo.cs.nmsu.edu:5004/phylotastic_ws/tnrs/ot/names"
        headers = {'content-type': 'application/json'}

        json_inputdata = json.dumps(inputData)

        response = requests.post(url, data=json_inputdata, headers=headers)

        if response.status_code == requests.codes.ok:
                print response.text
        else:
```

```python
            print 'Error in response'

if __name__ == '__main__':

        inputData = {
                'scientificNames': ["Formica exsectoides", "Formica pecefica"]
        }

        call_service(inputData)
```