Module 3
HTTP, RESTful APIs

CS W169A: Software Engineering

1 Github Routes

Read through and try to answer the following questions. Work in pairs if you can!

1.1 Requests

Without looking at any documentation, discuss what the following HTTP requests might do (no specific answer format required, just a general idea). *Note*: These links do not work, but determine what the request type and arguments would do if they did exist.

- GET https://github.com/orgs/cs169/repos
- GET https://github.com/repos/cs169/homework2
- POST https://github.com/orgs/cs169/repos

1.2 API Documentation

Read through GitHub's API documentation, which can be found at https://developer.github.com/v3. Find answers to the following questions.

- How can I get publicly available information about a user?
- How can I list all pull requests of a repository?
- How can I get all closed pull requests of a repository?
- How can I create a new pull request?
- Which input values are required to create a new pull request?

2 API Implementation

Finish the following ruby implementation for a simple todo API. Assume you have access to a params hash with any necessary query parameters, along with a format_as_json(object) function. Return results as JSON when applicable.

```ruby
class User
  attr_reader :id
  attr_accessor :todo

  def initialize
    @id = app.get_new_user_id
    @todo = Todo.new
  end
end
```

```ruby
class Todo
  def initialize
    @items = Array.new
  end

  def add item
    if not @items.include? item
      @items << item
    end
  end

  def delete item
    @items.delete item
  end

  def view_item item_id
    # assume each item instance has an accessible id field,
    # and all items/ids are unique
    item = _____
    format_as_json item unless item.nil?
  end
end

get '/user/:id/todo' do
  user = get_user_by_id params[:id]
  _____
  _____
end

get '/user/:id/todo/:item_id' do
  user = get_user_by_id params[:id]
  _____
  _____
end

post '/user/:id/todo' do
  user = get_user_by_id params[:id]
  request.body.rewind
  raw_item = JSON.parse request.body.read
  _____
  _____
end

delete '/user/:id/todo/:item' do
  user = get_user_by_id params[:id]
  _____
  _____
end
```