```ruby
 1 source 'https://rubygems.org'
 2 git_source(:github) { |repo| "https://github.com/#{repo}.git" }
 3
 4 ruby '2.7.2'
 5
 6 # Bundle edge Rails instead: gem 'rails', github: 'rails/rails'
 7 gem 'rails', '~> 6.0.3', '>= 6.0.3.4'
 8 # Use sqlite3 as the database for Active Record
 9 gem 'sqlite3', '~> 1.4'
10 # Use Puma as the app server
11 gem 'puma', '~> 4.1'
12 # Use SCSS for stylesheets
13 gem 'sass-rails', '>= 6'
14 # Transpile app-like JavaScript. Read more: https://github.com/rails/
   webpacker
15 gem 'webpacker', '~> 4.0'
16 # Turbolinks makes navigating your web application faster. Read more:
   https://github.com/turbolinks/turbolinks
17 gem 'turbolinks', '~> 5.2.0'
18 # Build JSON APIs with ease. Read more: https://github.com/rails/
   jbuilder
19 gem 'jbuilder', '~> 2.7'
20 # Use chartkick for chart and graph creation
21 gem 'chartkick'
22 # Use octokit for GitHub API calls
23 gem 'octokit', '~> 4.0'
24 # Use figaro for environmental variable access
25 gem 'figaro'
26 # Reduces boot times through caching; required in config/boot.rb
27 gem 'bootsnap', '>= 1.4.2', require: false
28
29 group :development, :test do
30   # Call 'byebug' anywhere in the code to stop execution and get a
   debugger console
31   gem 'byebug', platforms: %i[mri mingw x64_mingw]
32 end
33
34 group :development do
35   # Access an interactive console on exception pages or by calling '
   console' anywhere in the code.
36   gem 'web-console', '>= 3.3.0'
37   # Use Dotenv for environment variables
38   gem 'dotenv', '~> 2.2.1'
39 end
40
41 group :test do
42   # Adds support for Capybara system testing and selenium driver
43   gem 'capybara', '>= 2.15'
44   gem 'selenium-webdriver'
45   # Easy installation and use of web drivers to run system tests with
   browsers
46   gem 'webdrivers'
47 end
48
49 # Windows does not include zoneinfo files, so bundle the tzinfo-data
   gem
50 gem 'tzinfo-data', platforms: %i[mingw mswin x64_mingw jruby]
```

```
 1  # See https://help.github.com/articles/ignoring-files for more about
    ignoring files.
 2  #
 3  # If you find yourself ignoring temporary files generated by your text
     editor
 4  # or operating system, you probably want to add a global ignore
    instead:
 5  #   git config --global core.excludesfile '~/.gitignore_global'
 6
 7  # Ignore bundler config.
 8  /.bundle
 9
10  # Ignore the default SQLite database.
11  /db/*.sqlite3
12  /db/*.sqlite3-journal
13  /db/*.sqlite3-*
14
15  # Ignore all logfiles and tempfiles.
16  /log/*
17  /tmp/*
18  !/log/.keep
19  !/tmp/.keep
20
21  # Ignore pidfiles, but keep the directory.
22  /tmp/pids/*
23  !/tmp/pids/
24  !/tmp/pids/.keep
25
26  # Ignore uploaded files in development.
27  /storage/*
28  !/storage/.keep
29
30  /public/assets
31  .byebug_history
32
33  # Ignore master key for decrypting credentials and more.
34  /config/master.key
35
36  /public/packs
37  /public/packs-test
38  /node_modules
39  /yarn-error.log
40  yarn-debug.log*
41  .yarn-integrity
42
43  /.idea
```

```
1 ruby-2.7.2
2
```

```ruby
 1 require 'octokit'
 2 require_relative 'contribution'
 3
 4 class GitMain
 5   # Excluding files that are binary and compiled files
 6   FILES_TO_EXCLUDE = %w[jar png bmp dll jpg jpeg exe ttf ico icns svg
   ogg mp3 wav bat].freeze
 7
 8   def init_client(token)
 9     # Change access token depending on repositories to access
10     client = Octokit::Client.new(access_token: token)
11     pp client.rate_limit
12     client
13   end
14
15   def pre_process(client, repo)
16     @repo = repo
17     files = []
18     file = client.tree(@repo, 'HEAD', { recursive: 1 })
19     file[:tree].each do |i|
20       filename = i[:path]
21       files.append(filename) if i[:type] != 'tree'
22     end
23     files
24   end
25
26   def process_git_file(filename, client)
27     filename_list = filename.downcase.split('.')
28     unless FILES_TO_EXCLUDE.include?(filename_list[filename_list.
   length - 1])
29       tracking = NilClass
30       current_file = filename
31       out = client.commits(@repo, path: current_file)
32       commit_list = read_commits(out)
33       i = 0
34       # Number of commits
35       commit_list.reverse.each do |c|
36         username = c[:author][:name]
37         begin
38           file_contents = client.contents(@repo, { path: current_file
   , ref: c[:sha] })
39         rescue Octokit::NotFound
40           next
41         end
42         file = Base64.decode64(file_contents[:content].split.join)
43         if i.zero?
44           tracking = Contribution.new(file, username)
45         else
46           tracking.update(file, username)
47         end
48         i += 1
49       end
50       tracking
51     end
52   end
53
54   def read_commits(data)
```

```ruby
55      results = []
56      data.each do |commit|
57        hash = commit.rels[:self].get.data
58        c = {
59          sha: hash.sha,
60          author: hash.commit.author
61        }
62        results.append(c)
63      end
64      results
65    end
66 end
67
```

```ruby
 1  require 'set'
 2
 3  Match = Struct.new(:a, :b, :size)
 4
 5  class Matcher
 6
 7    def calculate_ratio(matches, length)
 8      if length
 9        2.0 * matches / length
10      else
11        1.0
12      end
13    end
14
15    private :calculate_ratio
16
17    def initialize(a = '', b = '')
18      @first = @second = nil
19      set_seqs(a, b)
20    end
21
22    def set_seqs(first, second)
23      set_seq1(first)
24      set_seq2(second)
25    end
26
27    def set_seq1(first)
28      nil if first.eql?(@first)
29      @first = first
30      @matching_blocks = nil
31    end
32
33    def set_seq2(second)
34      nil if second.eql?(@second)
35      @second = second
36      @matching_blocks = nil
37      chain_b
38    end
39
40    def chain_b
41      @b2j = Hash.new(0)
42      @second.each_char.with_index do |i, el|
43        indices = @b2j.fetch(el, [])
44        indices.append(i)
45      end
46
47      # Purge popular elements for b that are not junk
48      @bpopular = Set[]
49      n = @second.length
50      return unless n >= 200
51
52      ntest = n.div(100) + 1
53      @b2j.each_pair do |el, ind|
54        @bpopular.add(el) if ind.length > ntest
55      end
56      @bpopular.each do |el|
57        @b2j.delete(el)
```

```ruby
 58        end
 59      end
 60
 61    private :chain_b
 62
 63    def find_longest_match(alow = 0, ahigh = nil, blow = 0, bhigh = nil
    )
 64      a = @first
 65      b = @second
 66      ahigh = a.length if ahigh.eql?(nil)
 67      bhigh = b.length if bhigh.eql?(nil)
 68      besti = alow
 69      bestj = blow
 70      bestsize = 0
 71      j2len = {}
 72      nothing = []
 73
 74      (alow..ahigh).each do |i|
 75        newj2len = {}
 76        @b2j.fetch(a[i], nothing).each do |j|
 77          # a[i] matches b[j]
 78          next if j < blow
 79          break if j >= bhigh
 80
 81          k = newj2len[j] = j2len.get(j - 1, 0) + 1
 82          next unless k > bestsize
 83
 84          besti = i - k + 1
 85          bestj = j - k + 1
 86          bestsize = k
 87        end
 88        j2len = newj2len
 89      end
 90      while besti > alow && bestj > blow && a[besti - 1] == b[bestj - 1
    ]
 91        besti -= 1
 92        bestj -= 1
 93        bestsize += 1
 94      end
 95      while besti + bestsize < ahigh && bestj + bestsize < bhigh && a[
    besti + bestsize] == b[bestj + bestsize]
 96        bestsize += 1
 97      end
 98      Match.new(besti, bestj, bestsize)
 99    end
100
101    def get_matching_blocks
102      @matching_blocks unless @matching_blocks.nil?
103      asize = @first.length
104      bsize = @second.length
105
106      queue = [[0, asize, 0, bsize]]
107      matching_blocks = []
108      until queue.empty?
109        alow, ahigh, blow, bhigh = queue.pop
110        i, j, k = x = find_longest_match(alow, ahigh, blow, bhigh)
111        next unless k
```

```ruby
112
113        matching_blocks.append(x)
114        queue.append([alow, i, blow, j]) if alow < i && blow < j
115        queue.append([i + k, ahigh, j + k, bhigh]) if i + k < ahigh &&
   j + k < bhigh
116      end
117      matching_blocks.sort
118
119      i1 = j1 = k1 = 0
120      non_adjacent = []
121      matching_blocks.each do |i2, j2, k2|
122        # Is this block adjacent to i1, j1, k1?
123        if i1 + k1 == i2 && j1 + k1 == j2
124          # Yes, so collapse them -- this just increases the length of
125          # the first block by the length of the second, and the first
126          # block so lengthened remains the block to compare against.
127          k1 += k2
128        else
129          # Not adjacent.  Remember the first block (k1==0 means it's
130          # the dummy we started with), and make the second block the
131          # new block to compare against.
132
133          non_adjacent.append([i1, j1, k1]) if k1
134          i1 = i2
135          j1 = j2
136          k1 = k2
137        end
138      end
139      non_adjacent.append([i1, j1, k1]) if k1
140      non_adjacent.append([asize, bsize, 0])
141      @matching_blocks = [non_adjacent.each.map { |el1, el2, el3| Match
   .new(el1, el2, el3) }]
142      @matching_blocks
143    end
144
145    def ratio
146      matches = 0
147      get_matching_blocks.each { |triple| matches += triple.size }
148      calculate_ratio(matches, @first.length + @second.length)
149    end
150  end
151
```

```ruby
 1 require_relative 'matcher'
 2
 3 class Contribution
 4
 5   def initialize(rev, user)
 6     init_variables(rev.to_s, user)
 7     init_commits(0, rev.length, @new_commit_no)
 8     move_to_current
 9   end
10
11   def update(rev, user)
12     @new_code_text = rev.to_s
13     @new_commit_no = @commit_no + 1
14     @user_index[@new_commit_no] = user
15     matches = calc_line_change(rev.to_s)
16
17     pointer = 0
18     sort_lambda = ->(l) { l[1] }
19     matches.sort_by(&sort_lambda)
20     matches.each do |match|
21       if match[1] != pointer && match[1] < @new_code_text.length
22         init_commits(0, match[1] - pointer, @new_commit_no)
23         pointer += match[1] - pointer
24       end
25       add_matching_blocks(match[0], match[2])
26       pointer += match[2]
27     end
28     if @new_code_text.length > @new_code.length
29       init_commits(0, @new_code_text.length - @new_code.length, @new_commit_no)
30     end
31     move_to_current
32   end
33
34   def calculate_ownership
35     aggregate = Hash.new(0)
36     counts = Hash.new(0)
37     sums_persistence = Hash.new(0)
38     avg_persistence = Hash.new(0)
39     # auxiliary counter
40     i = 0
41
42     # inverting scores to get persistence
43     persistence = @code.map do |x|
44       @commit_no + 1 - x
45     end
46     # self.code and persistence are exactly the same length
47     @code.each do |x|
48       if counts.fetch(x, 0).zero?
49         counts[x] = 1
50       else
51         counts[x] += 1
52       end
53       if aggregate.fetch(x, 0).zero?
54         aggregate[x] = persistence[i]
55       else
56         aggregate[x] += persistence[i]
```

```ruby
 57        end
 58        i += 1
 59      end
 60      counts.each do |x|
 61        if sums_persistence.fetch(@user_index[x], 0).zero?
 62          sums_persistence[@user_index[x[0]]] = counts[x[0]]
 63          avg_persistence[@user_index[x[0]]] = aggregate[x[0]]
 64        else
 65          sums_persistence[@user_index[x[0]]] += counts[x]
 66          avg_persistence[@user_index[x[0]]] += aggregate[x]
 67        end
 68      end
 69      [sums_persistence, avg_persistence]
 70    end
 71
 72    private
 73
 74    def init_variables(rev, user)
 75      @new_code_text = rev
 76      @new_code = []
 77      @user_index = Hash.new(0)
 78      @commit_no = 0
 79      @new_commit_no = @commit_no + 1
 80      @user_index[@new_commit_no] = user
 81    end
 82
 83    def init_commits(start, stop, number)
 84      (start..stop).each do
 85        @new_code.append(number)
 86      end
 87    end
 88
 89    def move_to_current
 90      @code = @new_code
 91      @code_text = @new_code_text
 92      @commit_no = @new_commit_no
 93    end
 94
 95    def add_matching_blocks(old_pos, length)
 96      (0..length).each do |x|
 97        @new_code.append(@code[x + old_pos])
 98      end
 99    end
100
101    def calc_line_change(revision, threshold = 0.3)
102      matches = []
103      original = @code_text.lines.map(&:chomp)
104      new = revision.lines.map(&:chomp)
105      found = TRUE
106
107      line_char_original = []
108      line_char_new = []
109      line_count = 0
110
111      (0..original.length - 1).each do |x|
112        line_char_original.append(line_count)
113        line_count += original[x].length
```

```ruby
114      end
115      line_count = 0
116      (0..new.length - 1).each do |y|
117        line_char_new.append(line_count)
118        line_count += new[y].length
119      end
120
121      count = Hash.new(0)
122      new.each do |word|
123        count[word] += 1
124      end
125
126      diffs = []
127      tmp_new = new # Create temporary list for reference
128      y_list = (0..new.length - 1).to_a # Temporary list used for
   dynamic recursion
129      counter = 0
130
131      (0..original.length - 1).each do |x|
132        diffs.append([])
133        if (count[original[x]]).positive?
134          y = y_list.index(tmp_new.index(original[x]))
135          begin
136            diffs[x].append([x, y_list[y], 1.0,
137                             [Match.new(0, 0, original[x].length),
138                              Match.new(original[x].length, original[x
   ].length, 0)]])
139            y_list.delete(y_list[y])
140            tmp_new[tmp_new.index(original[x])] = 0
141            count[original[x]] -= 1
142          rescue TypeError
143            next
144          end
145        else
146          (0..y_list.length - 1).each do |z|
147            counter += 1
148            line_diff_result = Matcher.new(original[x], new[y_list[z]])
149            diffs[x].append([x, y_list[z], line_diff_result.ratio,
150                             line_diff_result.get_matching_blocks])
151            if line_diff_result.ratio == 1
152              y_list.delete(y_list[z])
153              break
154            end
155          end
156        end
157      end
158
159      to_delete = -9999
160      while found.eql?(true)
161        found = false
162        max_match = [0, 0, 0, 0]
163        (0..diffs.length - 1).each do |x|
164          (0..diffs[x].length - 1).each do |y|
165            if diffs[x][y][1] == to_delete
166              diffs[x][y] = [0, 0, 0, 0]
167            elsif diffs[x][y][2] > threshold && max_match[2] < diffs[x
   ][y][2]
```

```ruby
168             max_match = [diffs[x][y][0], diffs[x][y][1], diffs[x][y][
    2], diffs[x][y][3], x]
169           end
170         end
171       end
172       next unless max_match[2] != 0
173
174       found = true
175       max_match[3].each do |m|
176         next unless m[2] != 0 && m.is_a?(Match)
177
178         matches.append([line_char_original[max_match[0]] + m[0],
179                         line_char_new[max_match[1]] + m[1],
180                         m[2]])
181       end
182       diffs.delete(diffs[max_match[4]])
183       to_delete = max_match[1]
184     end
185     matches
186   end
187 end
188
```

```erb
 1 <div class="container-fluid home align-items-center justify-content-
   center">
 2   <div class="row align-items-center justify-content-center pt-3">
 3     <div class="col-sm-2 text-center">
 4       <img class="img mb-4" src="https://image.flaticon.com/icons/png/
   512/25/25231.png" alt="" width="72" height="72">
 5     </div>
 6     <div class="col-sm-4">
 7       <h1 class="h3 text-center">
 8         Code Contribution Calculator
 9       </h1>
10     </div>
11     <div class="col-sm-2">
12     </div>
13   </div>
14   <div class="row justify-content-center mt-2">
15     <div class="col text-center">
16       <%=
17         link_to "Sign in with GitHub", authorize, class: "btn btn-auth
   btn-github large"
18       %>
19     </div>
20   </div>
21 </div>
22
```

```erb
 1 <div class="container-fluid">
 2   <div class="row">
 3     <div class="col code" style="float: left">
 4       <code>
 5         <% html = ''
 6           @code.each_with_index do |x, i| %>
 7           <% html += case @code_text[i]
 8             when "\n" %>
 9               <% '<br/>' %>
10           <% when "\r" %>
11               <% '' %>
12           <% when nil %>
13               <% '' %>
14           <% when "\t" %>
15               <% '<span>  </span>' %>
16           <% else %>
17               <% "<span tooltip='%s' class='%s'>%s</span>" %
18                   [@user_index[x], @hashed_users[@user_index[x]], @code_text[i]] %>
19               <% end %>
20         <% end %>
21         <%= raw html %>
22       </code>
23     </div>
24   </div>
25 </div>
26
```

```erb
 1 <div class="container-fluid">
 2   <div class="nav nav-tabs row m-1">
 3     <h2 class="h3">Files from <%= @repo_name %></h2>
 4   </div>
 5   <div class="row m-2 justify-content-center">
 6     <div class="col-lg-6">
 7       <ul class="list-group">
 8       <% i = 1 %>
 9       <% @files.compact.each do |file| %>
10         <a href="<%= './files/' + i.to_s %>"
11            data-turbolinks="false"
12            class="list-group-item list-group-item-action list-group-
   item-dark">
13           <%= file %>
14         </a>
15         <% i += 1 %>
16      <% end %>
17      </ul>
18    </div>
19   </div>
20 </div>
```

```erb
 1 <header class="navbar navbar-dark sticky-top bg-dark">
 2   <h2 class="h3 ms-3">Result from <%= @repo_name %></h2>
 3 </header>
 4 <div class="container-fluid">
 5   <div class="row">
 6     <nav id="sidebarMenu" class="col-md-3 col-lg-2 d-md-block bg-dark
   sidebar collapse">
 7       <div class="position-sticky pt-3">
 8         <ul class="nav flex-column">
 9           <li class="nav-item">
10             <a class="nav-link" href="javascript: window.location.href
   = window.location.pathname + '/files';">File View</a>
11           </li>
12           <li class="nav-item">
13             <a class="nav-link" href="?team=true">Team View</a>
14           </li>
15         </ul>
16       </div>
17     </nav>
18     <div class="col b-3">
19       <h1 class="h3 text-center mb-4">Percentage of characters
   survived</h1>
20       <% if params[:team].eql? 'true' %>
21         <%= pie_chart @graphs[2], suffix: '%', legend: "bottom" %>
22       <% else %>
23         <%= pie_chart @graphs[0], suffix: '%', legend: "bottom" %>
24       <% end %>
25       <br>
26       <h1 class="h3 text-center mb-4">Persistence score per user</h1>
27       <% if params[:team].eql? 'true' %>
28         <%= column_chart @graphs[3].sort, xtitle: "Contributors",
   ytitle: "Persistence" %>
29       <% else %>
30         <%= column_chart @graphs[1].sort, xtitle: "Contributors",
   ytitle: "Persistence" %>
31       <% end %>
32     </div>
33   </div>
34 </div>
```

```erb
 1  <div class="container-fluid">
 2    <ul class="nav nav-tabs d-flex flex-row-reverse mb-3 align-items-
    center">
 3      <li class="m-2">
 4        <a href=<%= @profile_url %>> <%= @user_name %> </a>
 5      </li>
 6      <li class="m-2">
 7        <a href=<%= @profile_url %>>
 8          <%= image_tag @user_picture, size: "60x60" %>
 9        </a>
10      </li>
11      <li class="m-2 flex-fill">
12        <h1 class="h3">Code Contribution Calculator</h1>
13      </li>
14    </ul>
15    <div class="row mx-3">
16      <table class="table table-dark repos">
17        <thead>
18        <tr>
19          <th scope="col">#</th>
20          <th scope="col">Repo Name</th>
21          <th scope="col">Language</th>
22          <th scope="col">Last updated</th>
23        </tr>
24        </thead>
25        <tbody>
26        <% i = 1 %>
27        <% @repos.each do |repo| %>
28          <tr>
29            <th scope="row"><%= i %></th>
30            <td class="name">
31              <a href="<%='/repos/' + i.to_s%>" data-turbolinks="false">
32                <%= repo[:full_name] %>
33              </a>
34            </td>
35            <td> <%= repo[:language] %> </td>
36            <td> <%= repo[:updated_at] %> </td>
37            <% i += 1 %>
38          </tr>
39        <% end %>
40        </tbody>
41      </table>
42    </div>
43
44  </div>
45
```

```erb
 1 <!DOCTYPE html>
 2 <html lang="en">
 3   <head>
 4     <meta name="viewport" content="width=device-width, initial-scale=1
   .0">
 5     <title><%= content_for?(:title) ? yield(:title) : "Team Feedback
   Code Contributions" %></title>
 6     <%= csrf_meta_tags %>
 7     <%= csp_meta_tag %>
 8     <style type="text/css">
 9       <%= raw @styles %>
10     </style>
11     <%= stylesheet_link_tag 'application', media: 'all', 'data-
   turbolinks-track': 'reload' %>
12     <%= javascript_pack_tag 'application', 'data-turbolinks-track': '
   reload' %>
13     <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/
   dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-
   BmbxuPwQa2lc/FVzBcNJ7UAyJxM6wuqIj61tLrc4wSX0szH/Ev+nYRRuWlolflfl"
   crossorigin="anonymous">
14     <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/
   dist/js/bootstrap.bundle.min.js" integrity="sha384-b5kHyXgcpbZJO/
   tY9Ul7kGkf1S0CWuKcCD38l8YkeH8z8QjE0GmW1gYU5S9FOnJ0" crossorigin="
   anonymous"></script>
15
16     <table class="table table-dark">
17       <thead>
18         <tr>
19           <th scope="col">Names</th>
20           <th scope="col">Characters Survived</th>
21           <th scope="col">Persistence</th>
22         </tr>
23       </thead>
24       <tbody>
25         <%= raw @table %>
26       </tbody>
27     </table>
28   </head>
29   <body>
30     <%= yield %>
31   </body>
32 </html>
33
```

```erb
 1  <!DOCTYPE html>
 2  <html lang="en">
 3    <head>
 4      <meta name="viewport" content="width=device-width, initial-scale=1
    .0">
 5      <title><%= content_for?(:title) ? yield(:title) : "Team Feedback
    Code Contributions" %></title>
 6      <%= csrf_meta_tags %>
 7      <%= csp_meta_tag %>
 8
 9      <%= stylesheet_link_tag 'application', media: 'all', 'data-
    turbolinks-track': 'reload' %>
10      <%= javascript_pack_tag 'application', 'data-turbolinks-track': '
    reload' %>
11      <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/
    dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-
    BmbxuPwQa2lc/FVzBcNJ7UAyJxM6wuqIj61tLrc4wSX0szH/Ev+nYRRuWlolflfl"
    crossorigin="anonymous">
12      <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/
    dist/js/bootstrap.bundle.min.js" integrity="sha384-b5kHyXgcpbZJO/
    tY9Ul7kGkf1S0CWuKcCD38l8YkeH8z8QjE0GmW1gYU5S9FOnJ0" crossorigin="
    anonymous"></script>
13    </head>
14    <body>
15      <%= yield %>
16    </body>
17  </html>
18
```

```scss
 1  // Place all the styles related to the Home controller here.
 2  // They will automatically be included in application.css.
 3  // You can use Sass (SCSS) here: https://sass-lang.com/
 4
 5  div[class$="container-fluid home align-items-center justify-content-
    center"] {
 6    margin: 0;
 7    background-color: #161b22;
 8  }
 9
10  .img {
11    -webkit-filter: invert(1);
12    filter: invert(1);
13  }
14
15  .h3 {
16    color: #c9d1d9;
17  }
18
19  body {
20    overflow-x: hidden;
21    margin: 0;
22    justify-content: center;
23  }
```

```scss
 1  // Place all the styles related to the files controller here.
 2  // They will automatically be included in application.css.
 3  // You can use Sass (SCSS) here: https://sass-lang.com/
 4
 5  [tooltip]:before {
 6    content: attr(tooltip);
 7    position: absolute;
 8    opacity: 0;
 9
10    transition: all 0.15s ease;
11    padding: 10px;
12    color: #333;
13    border-radius: 10px;
14    box-shadow: 2px 2px 1px silver;
15  }
16
17  [tooltip]:hover:before {
18    opacity: 1;
19
20    background: yellow;
21    margin-top: -50px;
22    margin-left: 20px;
23  }
24
25  [tooltip]:not([tooltip-persistent]):before {
26    pointer-events: none;
27  }
28
29  span {
30    white-space: pre;
31  }
32
33  .col.code {
34    margin: 30px;
35    background-color: lightgray;
36    border-radius: 10px;
37  }
38
39  .table.table-dark {
40    --bs-table-bg: #212529;
41    float: right;
42    position: -webkit-sticky;
43    position: sticky;
44    top: 0;
45  }
```

```scss
 1  // Place all the styles related to the repos controller here.
 2  // They will automatically be included in application.css.
 3  // You can use Sass (SCSS) here: https://sass-lang.com/]
 4  div[class$="container-fluid"] {
 5    padding: 0;
 6    background-color: #161b22;
 7  }
 8
 9  p {
10    color: #c9d1d9;
11  }
12
13  td > a {
14    color: #fff;
15    text-decoration: none;
16  }
17
18  li > a {
19    text-decoration: none;
20  }
21
22  .table.table-dark.repos {
23    --bs-table-bg: transparent;
24  }
25
26  .name:hover {
27    color: #58a6ff;
28  }
```

```css
 1  /*
 2   * This is a manifest file that'll be compiled into application.css,
    which will include all the files
 3   * listed below.
 4   *
 5   * Any CSS and SCSS file within this directory, lib/assets/stylesheets
    , or any plugin's
 6   * vendor/assets/stylesheets directory can be referenced here using a
    relative path.
 7   *
 8   * You're free to add application-wide styles to this file and they'll
     appear at the bottom of the
 9   * compiled file so the styles you add here take precedence over
    styles defined in any other CSS/SCSS
10   * files in this directory. Styles in this file should be added after
    the last require_* statement.
11   * It is generally better to create a new file per style scope.
12   *
13   *= require_tree .
14   *= require_self
15   */
16  html {
17      margin: 0;
18      height: 100%;
19      background-color: #161b22;
20  }
```

```css
 1  /**
 2   * Button Object
 3   */
 4
 5
 6  .btn-auth,
 7  .btn-auth:visited {
 8      position: relative;
 9      display: inline-block;
10      height: 22px;
11      padding: 0 1em;
12      border: 1px solid #999;
13      border-radius: 2px;
14      margin: 0;
15      text-align: center;
16      text-decoration: none;
17      font-size: 14px;
18      line-height: 22px;
19      white-space: nowrap;
20      cursor: pointer;
21      color: #24292e;
22      background: #24292e;
23      -webkit-box-sizing: content-box;
24      -moz-box-sizing: content-box;
25      box-sizing: content-box;
26      -webkit-user-select: none;
27      -moz-user-select: none;
28      -ms-user-select: none;
29      user-select: none;
30      /* iOS */
31      -webkit-appearance: none; /* 1 */
32      /* IE6/7 hacks */
33      *overflow: visible;  /* 2 */
34      *display: inline; /* 3 */
35      *zoom: 1; /* 3 */
36  }
37
38  .btn-auth:before {
39      content: "";
40      float: left;
41      width: 22px;
42      height: 22px;
43      background: url(auth-icons.png) no-repeat 99px 99px;
44  }
45
46  /**
47   * 36px
48   */
49
50  .btn-auth.large {
51      height: 36px;
52      width: 500px;
53      line-height: 36px;
54      font-size: 20px;
55  }
56
57  .btn-auth.large:before {
```

```css
 58      width: 36px;
 59      height: 36px;
 60 }
 61
 62 /*
 63  * Remove excess padding and border in FF3+
 64  */
 65
 66 .btn-auth::-moz-focus-inner {
 67      border: 0;
 68      padding: 0;
 69 }
 70
 71 /* GitHub
 72    ====================================================================
    ======== */
 73
 74 .btn-github,
 75 .btn-github:visited {
 76      border-color: #d4d4d4;
 77      background: #24292e;
 78      background-image: -webkit-gradient(linear, 0 0, 0 100%, from(#
    f4f4f4), to(#ececec));
 79      background-image: -webkit-linear-gradient(#f4f4f4, #ececec);
 80      background-image: -moz-linear-gradient(#f4f4f4, #ececec);
 81      background-image: -ms-linear-gradient(#f4f4f4, #ececec);
 82      background-image: -o-linear-gradient(#f4f4f4, #ececec);
 83      background-image: linear-gradient(#f4f4f4, #ececec);
 84 }
 85
 86 .btn-github:hover,
 87 .btn-github:focus {
 88      border-color: #518cc6;
 89      border-bottom-color: #2a65a0;
 90      color: #0366d6;
 91      background-color: #599bdc;
 92      background-image: -webkit-gradient(linear, 0 0, 0 100%, from(#
    599bdc), to(#3072b3));
 93      background-image: -webkit-linear-gradient(#599bdc, #3072b3);
 94      background-image: -moz-linear-gradient(#599bdc, #3072b3);
 95      background-image: -ms-linear-gradient(#599bdc, #3072b3);
 96      background-image: -o-linear-gradient(#599bdc, #3072b3);
 97      background-image: linear-gradient(#599bdc, #3072b3);
 98 }
 99
100 .btn-github:active {
101      border-color: #2A65A0;
102      border-bottom-color: #518CC6;
103      background: #3072B3;
104      background: -webkit-gradient(linear, 0 0, 0 100%, from(#3072b3),
    to(#599bdc));
105      background: -webkit-linear-gradient(#3072b3, #599bdc);
106      background: -moz-linear-gradient(#3072b3, #599bdc);
107      background: -ms-linear-gradient(#3072b3, #599bdc);
108      background: -o-linear-gradient(#3072b3, #599bdc);
109      background: linear-gradient(#3072b3, #599bdc);
110 }
```

```css
111
112 /*
113  * Icon
114  */
115
116 .btn-github:before {
117     margin: 0 0.6em 0 -0.6em;
118     background-position: -44px 0;
119 }
120
121 .btn-github:hover:before,
122 .btn-github:focus:before,
123 .btn-github:active:before {
124     background-position: -66px 0;
125 }
126
127 .btn-github.large:before {
128     background-position: -72px -22px;
129 }
130
131 .btn-github.large:hover:before,
132 .btn-github.large:focus:before,
133 .btn-github.large:active:before {
134     background-position: -108px -22px;
135 }
136
```
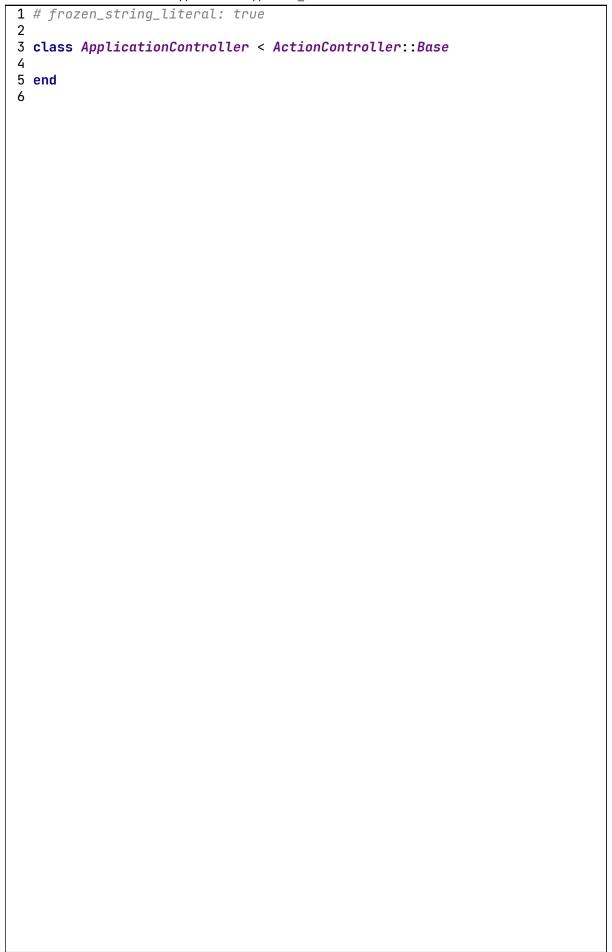
```ruby
1 require 'octokit'
2
3 module ApplicationHelper
4   def authorize
5     Octokit::Client.new.authorize_url('3de3fb01fbfdf1cfa6e6', scope: '
  user, repo')
6   end
7 end
8
```

```ruby
 1  class HomeController < ApplicationController
 2    def index; end
 3
 4    def callback
 5      session_code = request.env['rack.request.query_hash']['code']
 6      client_id = Figaro.env.github_client_id
 7      secret = Figaro.env.github_secret
 8      result = Octokit.exchange_code_for_token(session_code, client_id,
    secret,
 9                                               { accept: 'application/
    json' })
10      session[:access_token] = result[:access_token]
11
12      redirect_to '/repos'
13    end
14
15  end
16
```

```ruby
class FilesController < ApplicationController
  layout 'application', only: :index

  def index
    @repo_name = ReposController.repo_name
    @files = ReposController.files
  end

  def show
    @styles = ''
    @table = ''
    id = params[:id].to_i
    results = ReposController.results
    file_list = results.keys
    @hashed_users = {}
    user_list = results[file_list[id - 1]][0].keys
    results = results[file_list[id - 1]]
    @colours = colour_generate(user_list)
    i = 0
    user_list.each do |x|
      @hashed_users[x] = "a%s" % Digest::MD5.hexdigest(x)
      @styles += format(".%s {background-color:#%s;} \n", @
  hashed_users[x], @colours[x])
      @table += format("<tr><td><span class='%s'>%s</span></td><td>%s
  </td><td>%s</td></tr>",
                         @hashed_users[x], x, results[0].fetch(x, 0).
  to_s,
                         Math.log(results[1].fetch(x, 0), 10).round(2).
  to_s)
      i += 1
    end
    file_processed = ReposController.git.process_git_file(file_list[id
   - 1], ReposController.client)
    @code = file_processed.instance_variable_get(:@code)
    @code_text = file_processed.instance_variable_get(:@code_text)
    @user_index = file_processed.instance_variable_get(:@user_index)
  end

  private

  def colour_generate(user_list)
    colours = {}
    user_list.each do |user|
      colours[user] = Random.bytes(3).unpack1('H*')
    end
    colours
  end
end
```

```ruby
 1  require_relative '../gitmain'
 2
 3  class ReposController < ApplicationController
 4
 5    def index
 6      ReposController.git = GitMain.new
 7      ReposController.client = ReposController.git.init_client(session[:access_token])
      begin
 8        @user = ReposController.client.user
 9        @profile_url = @user[:html_url]
10        @@user_name = @user_name = @user[:name]
11        @user_picture = @user[:avatar_url]
12        @@repos = @repos = ReposController.client.repos(access_token: session[:access_token])
13      rescue Octokit::Unauthorized
14        redirect_to '/'
15      end
16    end
17
18
19    def show
20      id = params[:id].to_i
21      ReposController.repo_name = @repo_name = @@repos[id - 1][:full_name]
22      @files = ReposController.git.pre_process(ReposController.client, @@repos[id - 1][:full_name])
23      ReposController.results = @results = {}
24      file_processing
25      ReposController.files = @results.compact.keys
26      @graphs = generate_graphs(@results)
27    end
28
29    def generate_graphs(results)
30      log_base = 10
31      # These hashes store the data used to generate the graphs
32      sum_results = Hash.new(0)
33      log_results = Hash.new(0)
34      sum_results_team = Hash.new(0)
35      log_results_team = Hash.new(0)
36      results.each do |file|
37        next if file[1].nil?
38
39        file[1][0].each do |user|
40          sum_results[user[0]] += user[1]
41          if user[0].eql?(@@user_name)
42            sum_results_team[@@user_name] += user[1]
43          else
44            sum_results_team['Rest of team'] += user[1]
45          end
46        end
47
48        file[1][1].each do |user|
49          log_results[user[0]] += user[1]
50          if user[0].eql?(@@user_name)
51            log_results_team[@@user_name] += user[1]
52          else
53            log_results_team['Rest of team'] += user[1]
```

```ruby
54              end
55          end
56        log_results.each_key do |x|
57            log_results[x] = Math.log(log_results[x] + 1, log_base).round
    (2)
58        end
59        log_results_team.each_key do |x|
60            log_results_team[x] = Math.log(log_results_team[x] + 1,
    log_base).round(2)
61        end
62      end
63      total_lines = sum_results.values.sum * 1.0
64      sum_results.each_key do |x|
65        sum_results[x] = ((sum_results[x] / total_lines) * 100).round(2
    )
66      end
67      sum_results_team.each_key do |x|
68        sum_results_team[x] = ((sum_results_team[x] / total_lines) *
    100).round(2)
69      end
70      [sum_results, log_results, sum_results_team, log_results_team]
71    end
72
73    # Make getters and setters
74    class << self
75      attr_accessor :repo_name, :files, :results, :client, :git
76    end
77
78    private
79
80    def file_processing
81      @files.each do |file|
82        contribution = ReposController.git.process_git_file(file,
    ReposController.client)
83        unless contribution.nil?
84          log = contribution.calculate_ownership
85          @results.store(file.to_s, log)
86        end
87      end
88    end
89 end
90
```

```ruby
1  # frozen_string_literal: true
2
3  class ApplicationController < ActionController::Base
4
5  end
6
```

```ruby
1  Rails.application.routes.draw do
2    root 'home#index'
3
4    get 'home/index'
5    # For details on the DSL available within this file, see https://
   guides.rubyonrails.org/routing.html
6
7    get '/users/auth/github/callback', to: 'home#callback'
8
9    resources :repos do
10     resources :files
11   end
12
13 end
14
```

```ruby
 1 require_relative 'boot'
 2
 3 require 'rails/all'
 4
 5 # Require the gems listed in Gemfile, including any gems
 6 # you've limited to :test, :development, or :production.
 7 Bundler.require(*Rails.groups)
 8
 9 module CodeContributions
10   class Application < Rails::Application
11     # Initialize configuration defaults for originally generated Rails
   version.
12     config.load_defaults 6.0
13
14     # Settings in config/environments/* take precedence over those
   specified here.
15     # Application configuration can go into files in config/
   initializers
16     # -- all .rb files in that directory are automatically loaded
   after loading
17     # the framework and any gems in your application.
18   end
19 end
20
```

```yaml
1 GITHUB_CLIENT_ID: 3de3fb01fbfdf1cfa6e6
2 GITHUB_SECRET: 9ae80d00012455ba36016c2691c2606cc11b5879
```