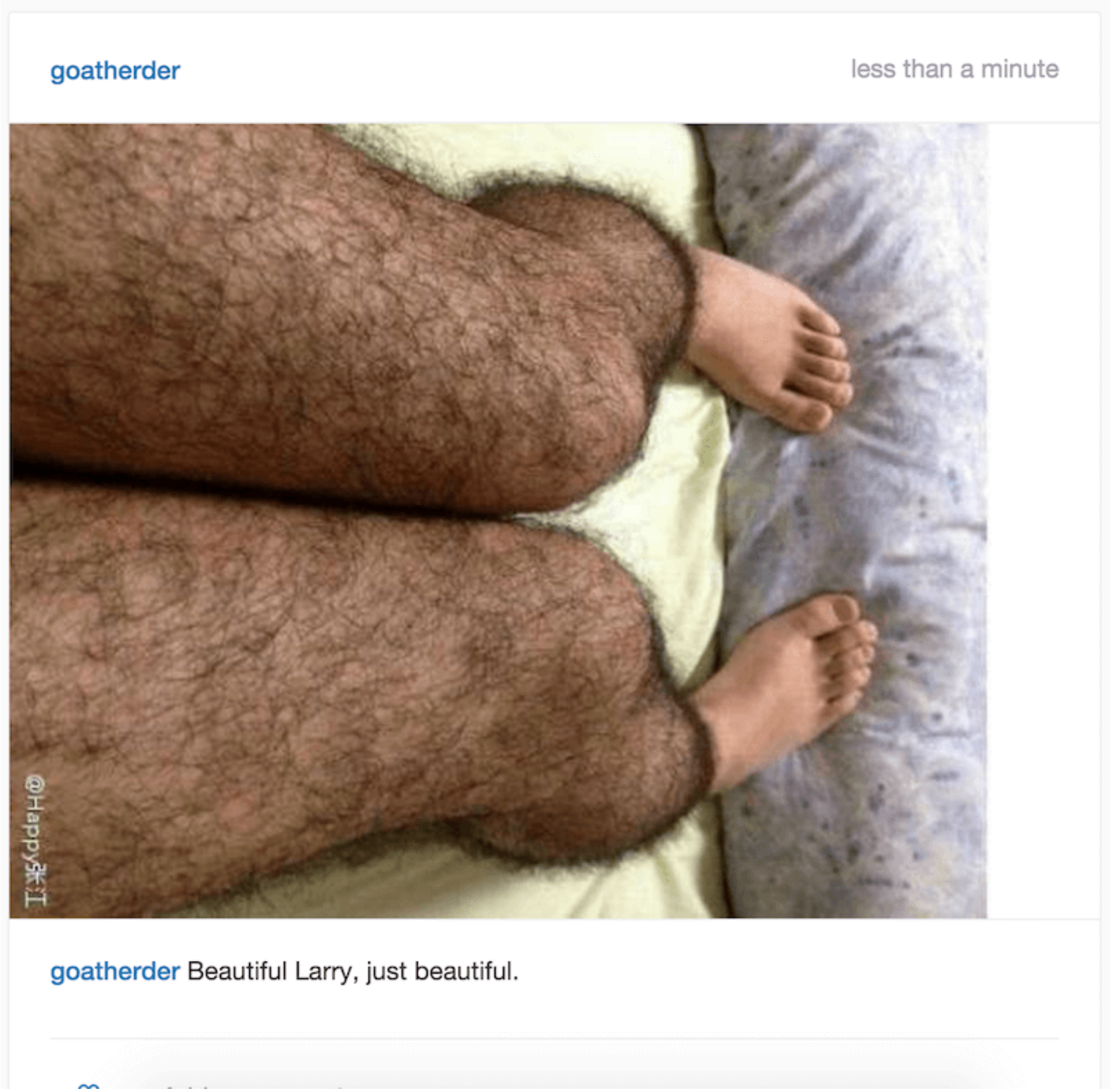
Chapter 5 - Liking Larry's Legs

Larry has a spectacular set of pins, check them out:



Larry needs a feature on his favourite social network (Photogram) where he can accumulate likes for his posts, so he can bask in the glory of sharing his lovely legs with the world. And in this Rails tutorial, we're going to give it to him.

How do we want our likes to work?

- No matter the context that I'm viewing a specific post, I'd like to be able to click a little heart icon under the image to add a 'like' to the post.
- Once I've liked a post, I'd like to see the 'like' count go up and also have my name added to the post's list of likers.
- My name on the list of likers should link back to my own profile page.
- I want to be able to unlike a post once I've liked it, in case I made a mistake.

Perfect! Now we know exactly what we need to build. Now, let's get building.

The button, the likers

Cast your mind back to the comments guide and you should remember that we actually already created a placeholder like button for our users:

The problem is... **it's completely useless.**

Let's stop tricking our users and actually make it do something now. This feature will actually be quite familiar to you long time readers, we implemented something very similar for our likes. Here's how it'll work technically:

- User clicks on the like button.
- AJAX call is made to a 'like' action within the Posts controller.
- The like action increments the likes on the post by one and adds the likers user name to the list of likers for the appropriate post (we'll use the `acts_as_votable` gem for this.
- The heart icon for the post will turn solid red (instead of the default).

Try to patch together what you learnt in the previous tutorials. How do we tell that button to make an AJAX call? How do we use jQuery to amend the new user-name to the list of likers for the post and how do we change the icon? Check out the 'comments' tutorial for a reminder.

Also, check out the `acts_as_votable` documents here. They should cover just about everything you could possibly want.

Let's get building!

First, let's make sure our heart icon is clickable and also ensure each heart icon has a post-specific id, so we can ensure we're dealing with the correct post on a page of many posts.

Jump into your `app/views/posts/_post.html.haml` file and adjust line 24 to 27 to the following:

```
.comment-like-form.row
      .col-sm-1
        =link_to '', like_post_path(post.id), remote: true,
                                              id: "like_#
{post.id}",
                                              class: "glyphicon
glyphicon-heart-empty"
```

All we've done is add a post-specific id to each comment area and we've also moved our heart icon to the `link_to` helper itself. We've also added the `remote: true` property to the link, just as we added this same property to our forms in the comments tutorial.

Now, we need to make sure that we're linking to something useful. Something useful, like our new to be created 'like' action in our posts controller.

Jump in the posts controller now and add the new action below your existing `destroy` action:

```
def like
end
```

Now that we have a new action, we'll need to upgrade our `routes.rb` file to ensure that our action is accessible to our `link_to` helper. We'll make our like action a 'member' of the posts collection so we can still access the :id of the post we're referring to in the url. This will make more sense once we've completed it. In your routes file, adjust your posts collection to look like below:

```
resources :posts do
  resources :comments
  member do
    get 'like'
  end
end
```

If you were to refresh the dashboard of your Photogram feed and then mouse over the like link now, you should notice the link in the bottom of your browser will point to `posts/:id/like` which is perfect.

Let's get the 'like' action doing something useful now, let's make it increment the 'likes' of the appropriate post and also, list the user_name of the likers.

It's time to install the `acts_as_votable` gem. Add the gem to your gemfile:

```
gem 'acts_as_votable', '~> 0.10.0'
```

And run the `bundle install` command in your terminal.

Once the gem is downloaded and installed, you should be good to continue on this wonderful journey.

As per the `acts_as_votable` docs, we now need to run a migration to create the voters table.

```
rails generate acts_as_votable:migration
rake db:migrate
```

We can now add the `acts_as_votable` method to the top of our Post model file found at `app/models/post.rb`. The whole file should now look something like this:

```
class Post < ActiveRecord::Base
  acts_as_votable

  belongs_to :user
  has_many :comments, dependent: :destroy

  validates :user_id, presence: true
  validates :image, presence: true
  validates :caption, length: { minimum: 3, maximum: 300 }

  has_attached_file :image, styles: { :medium => "640x" }
  validates_attachment_content_type :image, :content_type =>
/\Aimage\/.*\Z/
end
```

Fantastic! Now, we can vote on our posts. More specifically, we can like posts!

Sneaky Side-note

This is a fantastic time to play with the new functionality in the rails console, so go ahead and have a play (it'll make it easier to understand what we're about to do moving forward). Here's an example, by just following along with the `acts_as_votable` docs (this assumes you have at least one user and one post existing on your application).

Run the rails console in your terminal with `rails c` and then follow along below:

```
# Creating your first like
user = User.last # Sets the user to a variable
post = Post.last # Sets the post to a variable
post.liked_by user # Creates the like as per the docs

# Let's count how many likes our post has
post.get_likes.size

# How about who's liked our post so far?
post.votes_for.up.by_type(User).voters do |voter|
  puts voter.user_name
end
```

Cool, right? It's good to play around like this because it makes the functionality concrete in your mind, once it's time to actually add it to your app. No where were

we...

Back to it!

Let's add some substance to our 'like' action in our Posts Controller now that we have some useful methods to work with and some knowledge of how they work. Open up the posts controller file and first, make sure you add the 'like' action to your `set_post` `before_action` at the top of your file:

```
before_action :set_post, only: [:show, :edit, :update, :destroy,
:like]
```

Now, add the following lines to your 'like' action:

```
def like
  if @post.liked_by current_user
    respond_to do |format|
      format.html { redirect_to :back }
      format.js
    end
  end
end
```

So what are we doing here? `@post.liked_by current_user` uses the `acts_as_votable` gem to cast a vote for the specific post. So, *if* it works and does indeed vote for the post, we'll respond with either some javascript or html. In this guide we'll be responding with some fancy javascript but alas, that will have to wait for Step two of this particular feature build (Once a week articles are killing me!).

Believe it or not, we can now actually like posts! Refresh your Photogram dashboard, or even a single post and click the like button. You'll be greeted with.... nothing.

Lame. Refresh your page and now see what happens. Oh, ok. Nothing still. Well rest assured that something *has in fact happened* in the background, it's just that we don't have anything in our views to show our likers at the moment.

Let's fix that now!

Editing our view so we can see who likes you.

That heading rhymes for what it's worth. Alright, now we have some functionality that let's us like posts, we just need a way to show these beautiful likes on said posts. First, we're going to move our whole 'likes' section of each post into it's own partial.

Why?

Well, as a part of the jQuery actions that we'll get into in the next part of this article, we'll actually be re-rendering that partial upon liking or un-liking a particular post so that the whole process feels 'real-time'. It's also nice to seperate concerns as a part of our application. Our new partial will seem kind of lame, but rest assured, it's for a good cause.

Jump into your `_post.html.haml` partial and edit it as below (I've included a bit of the surrounding code for context):

```
.image.center-block
      =link_to (image_tag post.image.url(:medium), class:'img-
responsive'),
                  post_path(post)
    .post-bottom
      = render 'posts/likes', post: post
      .caption
        .caption-content
          .user-name
            =link_to post.user.user_name,
profile_path(post.user.user_name)
```

So all we're adjusting is this line: `= render 'posts/likes', post: post`. What exactly is that line doing? We're rendering the 'posts/likes' partial. Note, we've included the posts directory as a part of this partial render call as we have other views (such as the 'profile' view) that aren't within the 'posts' directory. They'll need some context to find the file.

Also, we're passing the partial view some context for what `post` is. post is post.

Time to create our brand new partial view. Create a new file in the 'app/views/posts' folder and call it `_likes.html.haml`.

This new file should look like this:

```
.likes
  = likers_of post
```

So we have a div with the 'likes' class and we also have this new helper method staring us in the face. Why? It's nice to keep logic out of our views and we *will* need some logic to make this look nice.

So I suppose it's time to create this new helper method!

Navigate over to 'app/helpers/posts_helper.rb' and open that bad boy. I'll show you below what we want inside this file and explain exactly what we're doing below.

```
module PostsHelper
  def likers_of(post)
    votes = post.votes_for.up.by_type(User)
    user_names = []
    unless votes.blank?
      votes.voters.each do |voter|
        user_names.push(link_to voter.user_name,
                                profile_path(voter.user_name),
                                class: 'user-name')
      end
      user_names.to_sentence.html_safe + like_plural(votes)
    end
  end

  private

  def like_plural(votes)
    return ' like this' if votes.count > 1
    ' likes this'
  end
end
```

Quite a lot to take in right? Well, heres that same code again but with some added comments in order for you to make sense of it all:

```
module PostsHelper
  # Our new helper method
  def likers_of(post)
    # votes variable is set to the likes by users.
    votes = post.votes_for.up.by_type(User)
    # set user_names variable as an empty array
    user_names = []
    # unless there are no likes, continue below.
    unless votes.blank?
      # iterate through the voters of each vote (the users who
liked the post)
      votes.voters.each do |voter|
        # add the user_name as a link to the array
        user_names.push(link_to voter.user_name,
                                profile_path(voter.user_name),
                                class: 'user-name')
      end
      # present the array as a nice sentence using the
as_sentence method and also make it usable within our html.
Then call the like_plural method with the votes variable we set
earlier as the argument.
      user_names.to_sentence.html_safe + like_plural(votes)
    end
  end

  private

  def like_plural(votes)
    # If we more than one like for a post, use ' like this'
    return ' like this' if votes.count > 1
    # Otherwise, return ' likes this'
    ' likes this'
  end
end
```

Not so bad once you go through it step by step, right?

If you were to once again refresh your dashboard or individual post in your browser, you will now be welcomed with a lovely little 'like' area, listing all users who have liked a post (probably just yours). It might look a little strange for the moment though, you'll need to patch up some css.

Jump into your `app/assets/stylesheets/application.scss` file and copy the

new code in:

```
@import "bootstrap-sprockets";
 @import "bootstrap";

html {
  height: 100%;
}

body {
  height: 100%;
  background-color: #fafafa;
  font-family: proxima-nova, 'Helvetica Neue', Arial, Helvetica,
sans-serif;
}

.alert {
  margin-bottom: 0px;
}

/* ## NAVBAR CUSTOMISATIONS ## */

.navbar {
  margin-bottom: 0px;
}

.navbar-brand {
  a {
    color: #125688;
  }
}

.navbar-default {
  background-color: #fff;
  .navbar-nav li a {
    color: #125688;
  }
}

.navbar-container {
  max-width: 640px;
  margin: 0 auto;
}
```

```
/* ## POST CUSTOMISATIONS ## */

.posts-wrapper {
  padding-top: 40px;
  margin: 0 auto;
  max-width: 642px;
  width: 100%;
}

.post {
  background-color: #fff;
  border-color: #edeeee;
  border-style: solid;
  border-radius: 3px;
  border-width: 1px;
  margin-bottom: 60px;
  .post-head {
    flex-direction: row;
    height: 64px;
    padding-left: 24px;
    padding-right: 24px;
    padding-top: 24px;
    color: #125688;
    font-size: 15px;
    line-height: 18px;
    .user-name, .time-ago {
      display: inline;
    }
    .user-name {
      font-weight: 500;
    }
    .time-ago {
      color: #A5A7AA;
      float: right;
    }
  }
  .image {
    border-bottom: 1px solid #eeefef;
    border-top: 1px solid #eeefef;
  }
}

.post-bottom {
  .user-name, .comment-content {
    display: inline;
```

```
  }
  .caption {
    margin-bottom: 7px;
  }
  .user-name {
    font-weight: 500;
    color: #125688;
    font-size: 15px;
  }
  .user-name, .caption-content {
    display: inline;
  }
  #comment {
    margin-top: 7px;
    .user-name {
      font-weight: 500;
      margin-right: 0.3em;
    }
    .delete-comment {
      float: right;
      color: #515151;
    }
  }
  margin-bottom: 7px;
  padding-left: 24px;
  padding-right: 24px;
  padding-bottom: 10px;
  font-size: 15px;
  line-height: 18px;
}

.comment_content {
  font-size: 15px;
  line-height: 18px;
  border: medium none;
  width: 100%;
  color: #4B4F54;
}

.comment-like-form {
  padding-top: 24px;
  margin-top: 13px;
  margin-left: 24px;
  margin-right: 24px;
  min-height: 68px;
```

```
  align-items: center;
  border-top: 1px solid #EEEFEF;
  flex-direction: row;
  justify-content: center;
}

/* ## Wrapper and styling for the new, edit & devise views ## */

.edit-links {
  margin-top: 20px;
  margin-bottom: 40px;
}

.registration-bg {
  padding-top: 4em;
  height: 100%;
  background-image: image-url('regbackg.jpg');
  -moz-background-size: cover;
  -webkit-background-size: cover;
  -o-background-size: cover;
  background-size: cover;
}

.login-bg {
  padding-top: 4em;
  height: 100%;
  background-image: image-url('loginbg.jpg');
  -moz-background-size: cover;
  -webkit-background-size: cover;
  -o-background-size: cover;
  background-size: cover;
}

.log-in{
  margin-left: auto;
  margin-right: auto;
  text-align:center;
  border: none;
}

.panel {
  border-radius: 8px;
}

.panel-heading{
```

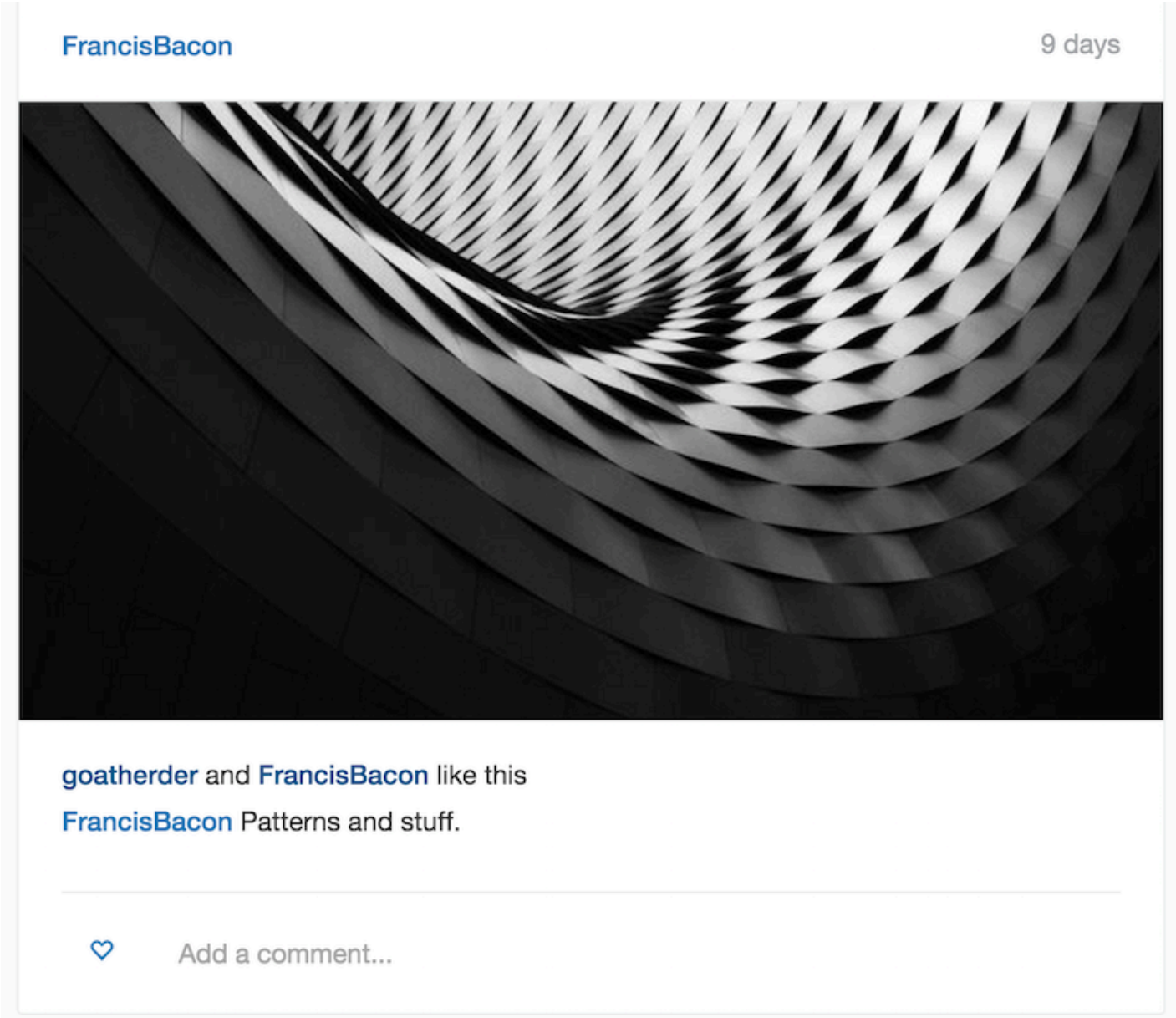
```
  h1 {
    text-align: center;
  }
}

#image-preview {
  margin: 0 auto;
}

#post_image {
  padding: 1em;
  margin: 0px auto;
}


#paginator {
  color: #4090DB;
  height: 120px;
  width: 120px;
  margin: 60px auto 40px;
  position: relative;
  display: table;
  border: 2px solid #4090DB;
  border-radius: 50%;
  :hover {
    border: 1px solid #2D6DA8;
    border-radius: 50%;
  }
}

#load_more {
  display: table-cell;
  font-size: 12px;
  padding: 0px 9px;
  vertical-align: middle;
  text-decoration: none;
  a :hover {
    color: #2D6DA8;
  }
}

.comments {
  .paginator {
    margin: 0.5em;
    .more-comments {
```

```
      color: #A5A7AA;
    }
  }
}

.comment-submit-button {
  position: absolute;
  left: -9999px;
}

.profile-header {
  padding: 20px 0;
}

.profile-image {
  margin: 20px auto;
  height: 152px;
  width: 152px;
}

.user-name-and-follow {
  display: inline;
}

.profile-user-name {
  display: inline;
}

.edit-button {
  border-color: #818488;
  color: #818488;
  margin-left: 20px;
}

.profile-bio {
  margin-top: 20px;
}

#user_bio {
  border: 1px solid gray;
}

#user_avatar {
  padding: 1em;
  margin: 0px auto;
```

```
}

.likes {
  margin-top: 20px;
  margin-bottom: 7px;
}
```

All I've done is added some styling for the 'likes' class and also tweaked how the 'user-name' class was presented.

Refresh your browser once more and it should look a little nicer.



Now, let's discuss what we need to build next:

- In order to see our new 'likes' for a post, we have to refresh the whole page

after clicking the little love heart. This is terrible.
- We have no indication whether our 'like' on a post worked or not. The little heart doesn't turn solid and the likes list isn't updated.
- We can't 'un-like' a post by clicking the button again.
- Each new like will just add another name to the list of likers. The majority of our screen real-estate will simply be names of likers in huge lists. After a certain point, we just want to show '212 likes', rather than list each of the 212 names.
- Some of our tests are failing now due to some dodgy capybara selectors.

But fear not, brave reader! We will be solving these issues and much, much more (well, maybe not too much) now!

Solid Red, An Ego Fed

Let's start small, let's make sure that the heart turns solid red upon successfully liking Larry's legs. In Step One of this feature, we made sure that clicking the button does in fact 'like' the post, the problem is that it doesn't actually show it. The 'like' action in the PostsController can return javascript thanks to this code:

```
respond_to do |format|
  format.html { redirect_to :back }
  format.js
end
```

So let's start writing some javascript in the form of jQuery to get something happening! Create a new file within the `app/views/posts` folder and call it 'like.js.erb'. Our jQuery will be held here. Within that file, type the following:

```
$("#like_<%= @post.id %>").removeClass('glyphicon-heart-
empty').addClass('glyphicon-heart');
```

This is finding the specific post we've liked by it's unique ID and we're removing the empty heart glyphicon and replacing it with the regular version. Simple!

Now, something that you will notice at this point is that if you've previously liked a post, it'll still be showing up as an empty heart. This is because in our `_post.html.haml` partial, we've hardcoded that glyphicon in like so:

```
=link_to '', like_post_path(post.id), remote: true,
                                                id: "like_#
{post.id}",
                                                class: "glyphicon
glyphicon-heart-empty"
```

Let's adjust it so it'll check if we've liked the post and adjust the class name appropriately.

First, change the above code to this:

```
=link_to '', like_post_path(post.id), remote: true,
                                                id: "like_#
{post.id}",
                                                class: "glyphicon
#{liked_post post}"
```

The `liked_post` helper method will determine whether we've liked the post and will then return the appropriate class. Open up the `app/helpers/posts_helper.rb` file and add the following method (make sure it's *not* a private method):

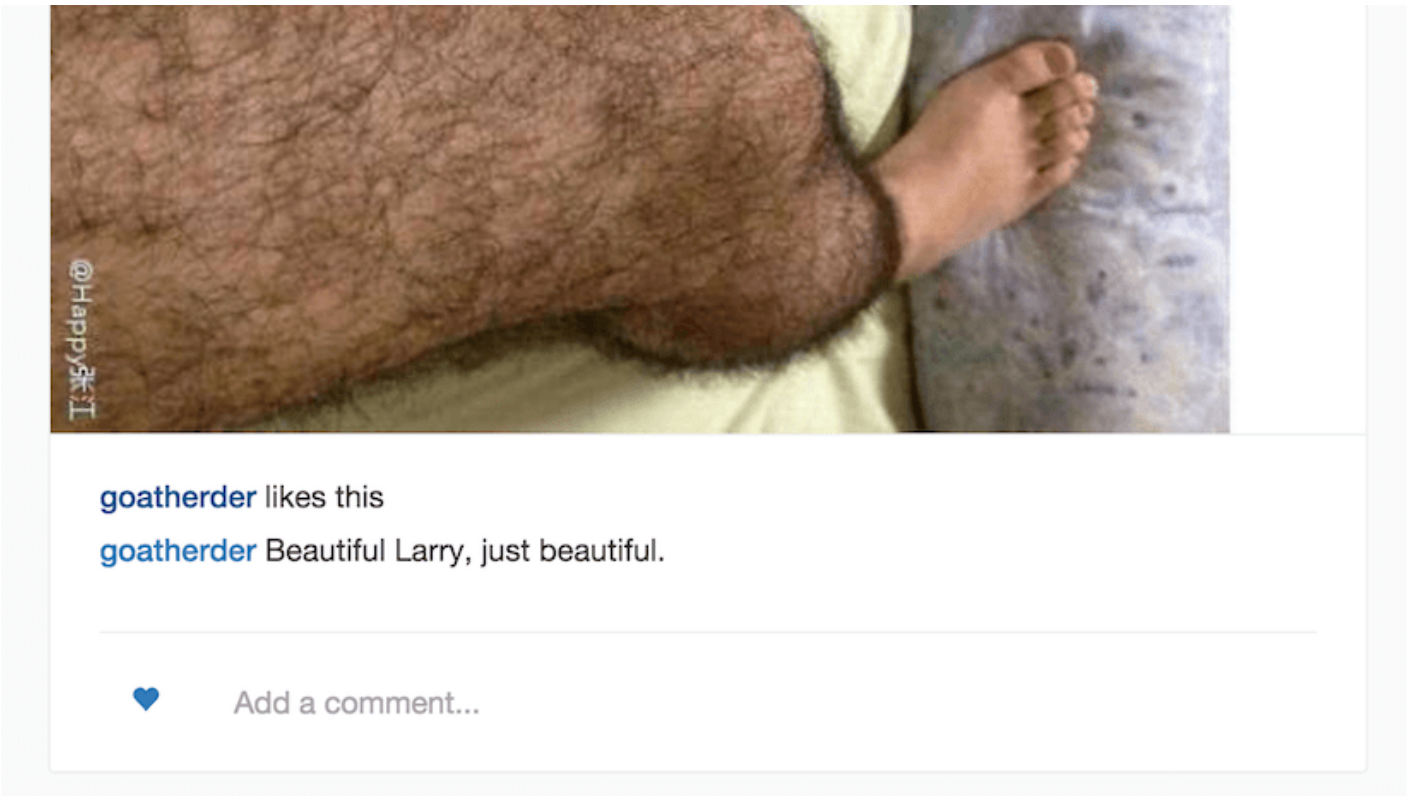
```
def liked_post(post)
  return 'glyphicon-heart' if current_user.voted_for? post
  'glyphicon-heart-empty'
end
```

Last but not least, in order to get the `voted_for?` method in the above code working, you'll need to add `acts_as_voter` to your `app/models/user.rb` file. Here's how my user.rb file looks:

```
class User < ActiveRecord::Base
  acts_as_voter
  validates :user_name, presence: true, length: { minimum: 4,
maximum: 12 }

  devise :database_authenticatable, :registerable,
         :recoverable, :rememberable, :trackable, :validatable

  has_many :posts, dependent: :destroy
  has_many :comments, dependent: :destroy

  has_attached_file :avatar, styles: { medium: '152x152#' }
  validates_attachment_content_type :avatar, content_type:
/\Aimage\/.*\Z/
end
```

This is explained in the acts_as_votable docs and is just giving us some handy methods to add to our toolbox when dealing with our likes.

So, refresh your dashboard now and you should be greeted with some nice, solid (albeit *blue*) hearts.

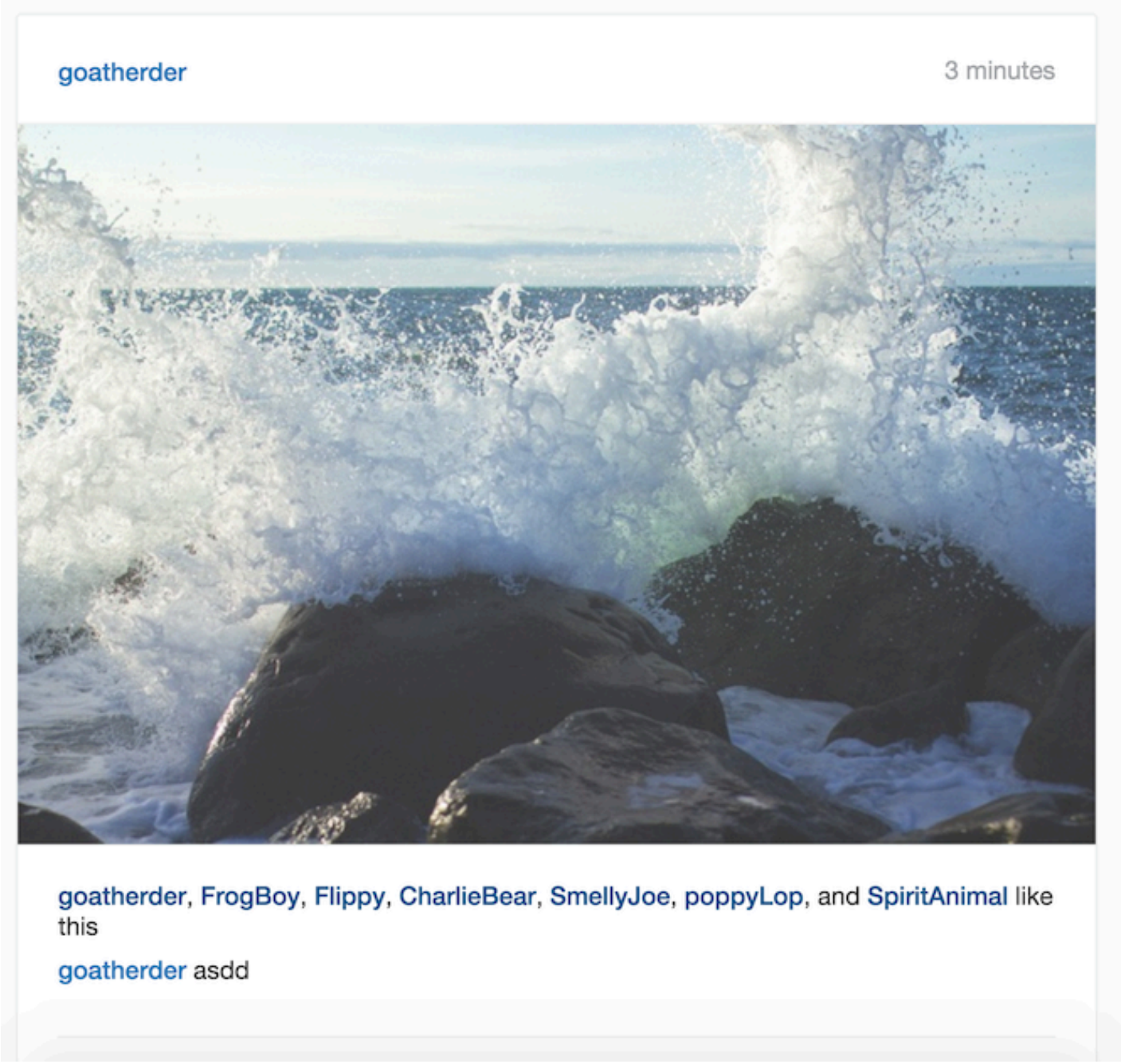


Also, if you like a post that you haven't previously liked now, you'll get a lovely transition from empty to solid love-heart. We're getting there!

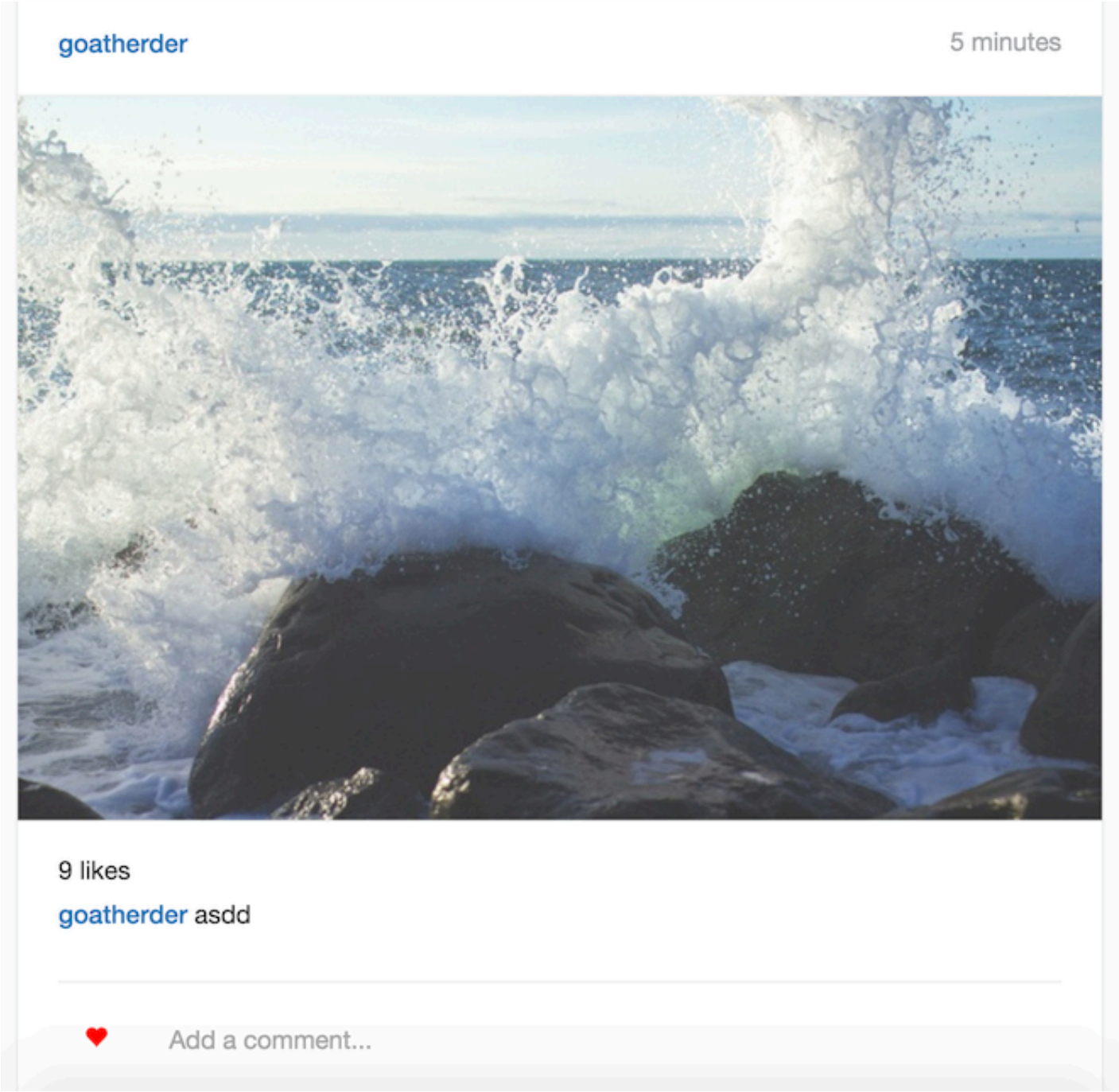
Displaying Likes in Two Ways

As mentioned earlier in the article, Instagram displays their like counts in two ways.

When there's only a few likes, list all the names under the image:



When there's lots of likes, just list the like count:



We'll do the same. At the moment, we're listing out the names with our helper methods BUT we're also listing the names to infinity, meaning that the names will continue forever, making our application look ridiculous. Let's fix it.

First, let's display a like count for a post if it has more than 8 seperate likes. First though, try it yourself! Think about it like this, for the sake of your helper methods:

1. Your view calls a `display_likes` helper method (yet this is a different name than we used in step one).
2. If the post has less than or equal to 8 likes, call our previous `list_likers` method.
3. If the post has more than 8 likes, call a new method, `count_likers`, which

will display the like count, followed with 'likes'.

Instagram will make that like count a clickable list of likers but we're not too worried about that for the sake of this tutorial (at this stage).

Here's how I tidied up my Posts Helper and created some extra logic for displaying the two different forms of 'likers'. I'll post the whole helper file here for the sake of context:

```ruby
module PostsHelper
  def display_likes(post)
    votes = post.votes_for.up.by_type(User)
    return list_likers(votes) if votes.size <= 8
    count_likers(votes)
  end

  def liked_post(post)
    return 'glyphicon-heart' if current_user.voted_for? post
    'glyphicon-heart-empty'
  end

  private

  def list_likers(votes)
    user_names = []
    unless votes.blank?
      votes.voters.each do |voter|
        user_names.push(link_to voter.user_name,
                                profile_path(voter.user_name),
                                class: 'user-name')
      end
      user_names.to_sentence.html_safe + like_plural(votes)
    end
  end

  def count_likers(votes)
    vote_count = votes.size
    vote_count.to_s + ' likes'
  end

  def like_plural(votes)
    return ' like this' if votes.count > 1
    ' likes this'
  end
end
```

There HAVE been some method name changes in the revision above for the sake of clarity so please take note of that. But really, the logic is as simple as I mention above the goat. Check for the like count, call the appropriate method. Beautiful!

Instantly Adding our Like

So, now that clicking the like button makes the like heart turn solid red, we now want our name added to the list of likers instantly or to have the 'like count' incremented by one.

Let's create this feature now.

We'll have to think of three scenarios:

1. There are currently no likes on the post.
2. There are currently 8 or less likes on the post.
3. There are currently more than 8 likes on the post.

We'll have to cater for each to make sure the experience is lovely for our users. But wait, what if we could just re-render that whole partial 'likes' area with our updated information? That would then call our helper method and take care of all of that for us!

Open up the `app/views/posts/like.js.erb` file you created earlier and add the following code. I'll explain how it works afterwards.

```
$("#like_<%= @post.id %>").removeClass('glyphicon-heart-
empty').addClass('glyphicon-heart');
$("#likes_<%= @post.id %>").html("<%= j (render partial:
'posts/likes', locals: { post: @post} ) %>");
```

First things first, do you notice the reference to the div id `#likes_<%= @post.id %>`? Well, you're going to have to add it to your views.

Update your `app/views/posts/_likes.html.haml` view as per below:

```
.likes{id: "likes_#{post.id}"}
  = display_likes post
```

Remember, all this does is give us a *very specific location* for javascript to do it's thang. Each `post.id` is unique, so we know that jQuery will always be looking at the right post when it updates.

Now, in the jQuery above, all we're doing is this:

- Finding the appropriate post 'likes' id element.
- Changing the html of that element to the rendered `_likes.html.haml` partial WITH the new information it'll have from our AJAX call.

To summarise: Our user-name will be added to the list!

Now, this isn't an ideal solution for this problem for one simple reason: We're making extra calls to the server every time we like a post (or dislike a post). How else could we achieve the same effect?

Just create a facade of adding names to the list with javascript. Rather than re-render that whole element with the partial every single time, just have some javascript running that will append the `current_user`'s user name to the likers list.

It'd be much more efficient and I recommend you try to create it yourself.

Unliking Likes

I'm going to leave this to you. No, seriously I am. Want me to give you some answers below the goat? Nope. It's all on you.

I will give you some really great hints though:

- Could we expand our `liked_post` helper method to actually include the `link_to` helper as well? That way, if the user has already liked a post, we could change the link to point to the unlike_post_path, rather than the like_post_path.
- What if we added some extra logic to the javascript file, so that not only will clicking on our new link adjust the class of our little heart, but also changed the link itself?
- What would the logic in a `unlike.js.erb` file look like? Probably pretty similar to that found in the `like.js.erb` file, no?
- What would the new `unlike` action look like in the posts controller? Pretty similar to the `like` action I imagine, just using some different `acts_as_votable` methods...

And that's it. Some simple steps to making a brand new `unlike` feature. Go forth and create something cool using what you've learnt so far by building the likes. I assure you it's very, very similar and you're awesome enough to do it.

Hearts are Red

Now lets very simply style our little heart so that it looks a little nicer for our users (they're very picky). At the moment, our heart is the default blue colour found in our app for all links, and we also get an ugly little underline on the heart when hovering with our mouse.

Jump on into your `app/assets/stylesheets/application.scss` file and add the following code to the bottom:

```
.like {
  text-decoration: none;
  color: red;
}

.like-button a:hover, a:focus {
  text-decoration: none;
  color: red;
}
```

You'll have to add the `like-button` class to your `app/views/posts/_post.html.haml` file like so:

```
.comment-like-form.row
  .col-sm-1.like-button
    =link_to '', like_post_path(post.id), remote: true,
                                          id: "like_#{post.id}",
                                          class: "like glyphicon
#{liked_post post}"
```

And the little love heart will now look a little better. Does it look Instagram good? No, no it doesn't. But it looks better than it did!

The End of Likes

So we've now added another big feature to Photogram, liking each other's posts. We've only got a little more functionality to add at this point, notifications and creating the follower / following relationships.

Another question that has been asked is this, "Should we just use a javascript front-end framework for an application like this, where we're playing with javascript a lot?". And the answer is almost certainly yes.

Instagram itself uses ReactJS for the front-end, so why bother using rails and jQuery?

Because it's great to see what can be done with Rails itself and it helps piece together the Rails puzzle. The javascript in the series so far hasn't been *too* awful and messy so for a project of this scope, so in the grand scheme of things it's

probably fine.

Until next chapter my friend, stay frosty and know that you're awesome.