APIs

APIs (*application programming interfaces*) are of vital importance to developers - they enable you to programmatically access data from various different services such as Twitter, Facebook and Spotify to name a few. APIs enable you to create applications powered by data from any service of your liking.

Twitter

Twitter provides a set of REST APIs in order to programmatically access, read & write Twitter data. You can access Twitter's REST APIs in many different ways - there are a whole bunch of libraries for any programming language you can imagine. In the context of this course, we will be using the appropriately-named **twitter** gem, which enables programmatic access to Twitter's REST APIs.

As we all know by now, installing a Ruby gem such as twitter is as simple as doing:

```
gem install twitter
```

As always, you might need _____ to add a sudo at the start of that command.

As per last session's homework, you should all have a Twitter account, so go ahead and head over to apps.twitter.com (log in with your Twitter account if you are not already logged in).

Once logged in, you should see the following:

Application Management

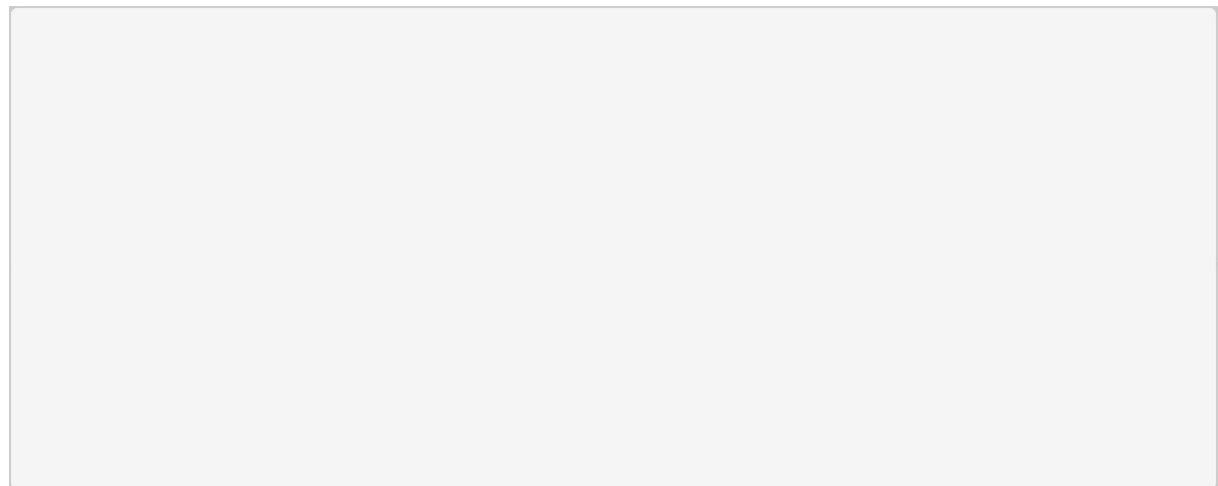## Twitter Apps

Create New App

We will create a new application, so click on the **Create New App** button.

You will now be presented with a form that you need to fill in with all your application details - fill in the name, description and website fields (leave the callback URL field blank) . Before pressing the **Create your Twitter application** button, ensure you select that you agree to the Developer Agreement.

Once you do that, if everything works out fine you will be taken to your application page where you can see some basic information. Click on the **Keys and Access Tokens** tab, where you should see a consumer key and secret under the **Application Settings** heading. We'll also need an access token, so go ahead and generate one by clicking the **Create my access token** near the bottom of the page. We will use these keys and secrets in our Ruby code to authenticate ourselves with Twitter so that it knows we have a genuine application to access data.

Let's try get some Twitter data using the twitter gem - for example, let's get tweets that
mention CodeFirstGirls:

```ruby
twitter_api = Twitter::REST::Client.new do |config|

    config.consumer_key       = "YOUR_CONSUMER_KEY"

    config.consumer_secret    = "YOUR_CONSUMER_SECRET"
```

```ruby
config.access_token         = "YOUR_ACCESS_TOKEN"

config.access_token_secret =
"YOUR_ACCESS_SECRET" end


cfg_tweets = twitter_api.search("CodeFirstGirls")

cfg_tweets.each do |tweet|

  puts "#{tweet.user.screen_name}:
#{tweet.text}" end
```

That's cool, right? That's just a small glimpse of what you can actually do using Twitter's API! You can look at the twitter gem's documentation and examples to discover some more things that you can do with it.

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Task

Get information related to the CodeFirstGirls Twitter user

Get a list of all followers for the CodeFirstGirls Twitter user

Figure out how to post a tweet using the twitter gem
Deploying

Heroku is a platform built for making it easy to deploy your code so that you can solely concentrate on developing your app/website rather than spending time setting up a server yourself. Head over to heroku.com and sign up for free.

Everything you need for getting your Ruby/Sinatra app deployed on Heroku can be found in Heroku's documentation.

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Task

Figure out how to deploy a Sinatra app on Heroku