

Ruby on Railsで！ WEBアプリケーション 勉強会

2016年8月3日

協力 未来会議室

自己紹介

- 村上 卓
- 29歳
- フリーランス
- AngularJS/Ruby On Rails

今日はRuby on Railsを
使って简易ブログを
作ります

方針

- 概念的な説明はしません (MVC、CoC、DRY...)
- とにかく書いて動かしてもらいます

Ruby on Railsとは？

- Webアプリケーションを作成するためのフレームワーク (OSS)
- プログラミング言語Rubyを使用

RoR、Railsとよく省略して表記されます

利用例

- Cookpad
- 食べログ
- Hulu
- Airbnb

開発環境

Cloud9

- クラウド開発環境
- ブラウザでIDEが利用可能

最近アマゾンに買収されました

Great News!



[M] /README.md x +

/README.md

Markdown

rails-tutorial .c9 app bin config db lib log public test tmp vendor .gitignore config.ru Gemfile Gemfile.lock Rakefile README.md README.rdoc

File Edit Find View Goto Run Tools Window Support Preview Run Project

MEMORY CPU DISK

SHAPE

WELCOME TO YOUR RAILS PROJECT ON CLOUD9 IDE!

TO GET STARTED, JUST DO THE FOLLOWING:

1. Run the project with the “Run Project” button in the menu bar on top of the IDE.
2. Preview your new app by clicking on the URL that appears in the Run panel below (<https://rails-tutorial-sugumura.c9users.io/>).

HAPPY CODING! THE CLOUD9 IDE TEAM

SUPPORT & DOCUMENTATION

Visit <http://docs.c9.io> for support, or to learn more about using Cloud9 IDE. To watch some training videos, visit <http://www.youtube.com/user/c9ide>

bash - "sugumur" x Immediate x +

sugumura:~/workspace \$

Cloud9でプロジェクト を作成

- Create a new workspaceを選択



Suguru Murakami

Workspaces

Shared With Me

Repositories

YOUR INDIVIDUAL SUBSCRIPTIONS

Free

Upgrade

Workspaces



Create a new workspace



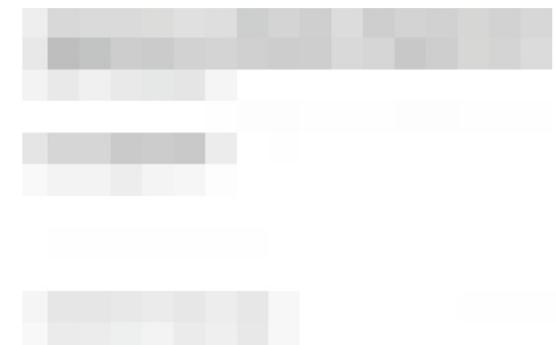
Clone

Open

1 CPU

512MB RAM

2GB HDD



Clone

Open

1 CPU

512MB RAM

2GB HDD



Clone

Open

1 CPU

512MB RAM

2GB HDD

Filter...



Ruby on Railsの環境

- Workspace nameに「rails-tutorial」と入力
- Choose a templateで「Ruby」を選択

Create a new workspace

Workspace name

rails-tutorial

Description

Make a short description of your workspace

Hosted workspace

Clone workspace

Remote SSH workspace

Salesforce



Private

This is a workspace for your eyes only



Public

This will create a workspace for everybody to see

Clone from Git or Mercurial URL (optional)

e.g. ajaxorg/ace or git@github.com:ajaxorg/ace.git

Choose a template



HTML5

node®

Node.js

PHP, Apache ...



Python

django

Django



Ruby



C++



Wordpress



Rails Tutorial



Blank

CS50

Harvard Unive...

Create workspace



[M] /README.md x +

/README.md

Markdown

rails-tutorial .c9 app bin config db lib log public test tmp vendor .gitignore config.ru Gemfile Gemfile.lock Rakefile README.md README.rdoc

File Edit Find View Goto Run Tools Window Support Preview Run Project

MEMORY CPU DISK

SHAPE

WELCOME

WELCOME TO YOUR RAILS PROJECT ON CLOUD9 IDE!

TO GET STARTED, JUST DO THE FOLLOWING:

1. RUN THE PROJECT WITH THE “RUN PROJECT” BUTTON IN THE MENU BAR ON TOP OF THE IDE.
2. PREVIEW YOUR NEW APP BY CLICKING ON THE URL THAT APPEARS IN THE RUN PANEL BELOW (<https://rails-tutorial-sugumura.c9users.io/>).

HAPPY CODING! THE CLOUD9 IDE TEAM

SUPPORT & DOCUMENTATION

Visit <http://docs.c9.io> for support, or to learn more about using Cloud9 IDE. To watch some training videos, visit <http://www.youtube.com/user/c9ide>

bash - "sugumur" x Immediate x +

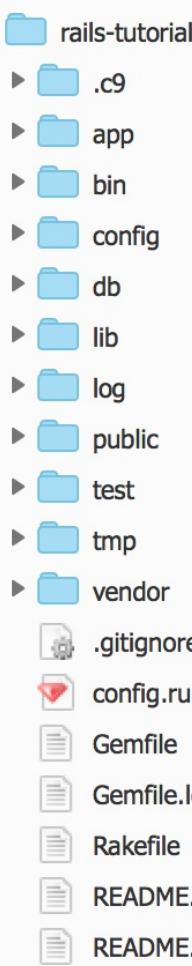
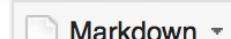
sugumura:~/workspace \$



[M] /README.md



/README.md



ファイルツリー

Welcome to your Rails project on Cloud9 IDE!

To get started, just do the following:

1. Run the project with the “Run Project” button in the menu bar on top of the IDE.
 2. Preview your new app by clicking on the URL that appears in the Run panel below (<https://rails-tutorial-sugumura.c9users.io/>).

Happy coding! The Cloud9 IDE team

Support & Documentation

Visit <http://docs.c9.io> for support, or to learn more about using Cloud9 IDE. To watch some training videos, visit <http://www.youtube.com/user/c9ide>.

bash - "sugumur × Immediate × 

sugumura:~/workspace \$

コマンドライン

実行

- 「Run Project」 を押す
- 「Preview」 を押す
 - 「Preview Running Application」 ボタンを押す



5:51 Markdown Spaces: 4

bash - "sugumura" >

Immediate (Java) ×

Ruby on Rails - F

Stop  Ruby on Rails Command: Runner: Ruby on Rail

Processing by Rails::WelcomeController#index as HTML
Rendered /usr/local/rvm/gems/ruby-2.3.0/gems/railties-4.2.5/lib/rails/templates/rails/welcome/index.html.erb
Completed 200 OK in 47ms (Views: 32.2ms | ActiveRecord: 0.0ms)

```
Started GET "/" for 222.5.196.154 at 2016-07-20 08:27:21 +0000
Cannot render console from 222.5.196.154! Allowed networks: 127.0.0.1, ::1, 127.0.0.0/127.255.255.255
Processing by Rails::WelcomeController#index as HTML
  Rendered /usr/local/rvm/gems/ruby-2.3.0/gems/railties-4.2.5/lib/rails/templates/rails/welcome/index.html.erb (3.0ms)
Completed 200 OK in 3ms (Views: 2.6ms | ActiveRecord: 0.0ms)
```

MEMORY
CPU
DISK

rails-tutorial .c9 app bin config db lib log public test tmp vendor .gitignore config.ru Gemfile Gemfile.lock Rakefile README.md README.rdoc

README.md [B] https://rails-tutorial-sugumura.c9users.io Browser

Welcome aboard

You're riding Ruby on Rails!

[About your application's environment](#)

Getting started

Here's how to get rolling:

1. Use `bin/rails generate` to create your models and controllers

To see all available options, run it without parameters.

2. Set up a root route to replace this page

You're seeing this page because you're running in development mode and you haven't set a root route yet.

Routes are set up in `config/routes.rb`.

Browse the documentation

[Rails Guides](#)
[Rails API](#)
[Ruby core](#)
[Ruby standard library](#)

bash - "sugumura" Immediate (Java) Ruby on Rails - F

Stop Ruby on Rails Command: Runner: Ruby on Rails (default) CWD ENV

```
cannot render console from 222.5.196.154! Allowed networks: 127.0.0.1, ::1, 127.0.0.0/127.255.255.255
Processing by Rails::WelcomeController#index as HTML
  Rendered /usr/local/rvm/gems/ruby-2.3.0/gems/railties-4.2.5/lib/rails/templates/rails/welcome/index.html.erb (0.1ms)
Completed 200 OK in 2ms (Views: 2.2ms | ActiveRecord: 0.0ms)
```

```
Started GET "/" for 222.5.196.154 at 2016-07-20 08:27:41 +0000
Cannot render console from 222.5.196.154! Allowed networks: 127.0.0.1, ::1, 127.0.0.0/127.255.255.255
Processing by Rails::WelcomeController#index as HTML
  Rendered /usr/local/rvm/gems/ruby-2.3.0/gems/railties-4.2.5/lib/rails/templates/rails/welcome/index.html.erb (0.1ms)
Completed 200 OK in 3ms (Views: 2.5ms | ActiveRecord: 0.0ms)
```

開発環境完成！

Hello world

コマンドを使用してコントローラーとビューを作成

```
$ bin/rails generate controller welcome index
```

作成されたファイル

```
create  app/controllers/welcome_controller.rb
route  get 'welcome/index'
invoke  erb
create    app/views/welcome
create    app/views/welcome/index.html.erb
invoke  test_unit
create    test/controllers/welcome_controller_test.rb
invoke  helper
create    app/helpers/welcome_helper.rb
invoke  test_unit
invoke  assets
invoke  coffee
create    app/assets/javascripts/welcome.coffee
invoke  scss
create    app/assets/stylesheets/welcome.scss
```

ビューの変更

ファイルツリーでindex.html.erbファイルを開きます

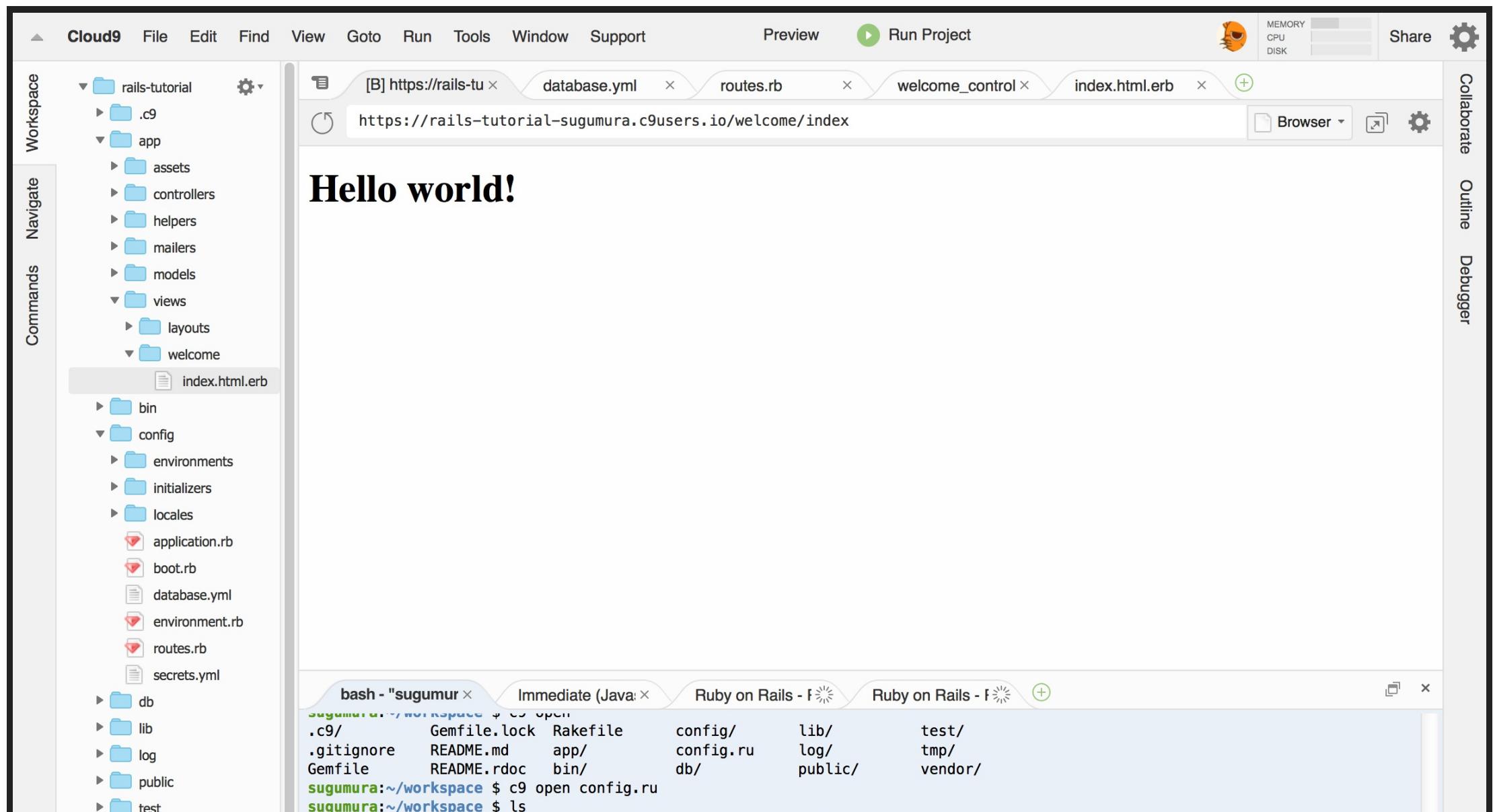
```
app/views/welcome/index.html.erb
```

中身を削除して書き換えます

```
<h1>Hello world!</h1>
```

結果

/welcom/index にアクセス



ルートに変更

ファイルツリーでroutes.rbファイルを開きます

config/routes.rb

rootを追加

```
Rails.application.routes.draw do
  get 'welcome/index'
  root 'welcome#index' # 追加

  # #はコメントです
end
```

結果

/にアクセスすると先ほどのHello worldが表示

ブログ投稿ページの作成

再度、 generateコマンドを利用

```
# gはgenerateの省略形  
$ bin/rails g controller articles
```

ルーティングに articlesを追加

ファイルツリーでroutes.rbファイルを開きます

config/routes.rb

```
get 'welcome/index'  
root 'welcome#index'  
  
resources :articles # 追加
```

ルーティング確認

rake routes コマンドを利用して有効なパス一覧を表示する

Prefix	Verb	URI	Pattern	Controller#Action
welcome_index	GET		/welcome/index(.:format)	welcome#index
	root	GET	/	welcome#index
articles	GET		/articles(.:format)	articles#index
	POST		/articles(.:format)	articles#create
new_article	GET		/articles/new(.:format)	articles#new
edit_article	GET		/articles/:id/edit(.:format)	articles#edit
	article	GET	/articles/:id(.:format)	articles#show
		PATCH	/articles/:id(.:format)	articles#update
		PUT	/articles/:id(.:format)	articles#update
		DELETE	/articles/:id(.:format)	articles#destroy

エラー確認

/articles/new にアクセス

The screenshot shows the Cloud9 IDE interface. On the left, the workspace sidebar displays the project structure for 'rails-tutorial'. In the center, a browser window is open at <https://rails-tutorial-sugumura.c9users.io/articles/new>, showing a red 'Unknown action' error page with the message 'The action 'new' could not be found for ArticlesController'. At the bottom, a terminal window shows the command `bin/rake routes` being run, listing routes like 'welcome_index GET /welcome/index(.:format)' and 'root GET /'.

Cloud9 File Edit Find View Goto Run Tools Window Support Preview Run Project Share

MEMORY
CPU
DISK

Workspace Navigate Commands

[B] https://rails-tutorial-sugumura.c9users.io/articles/new

Unknown action

The action 'new' could not be found for ArticlesController

bash - "sugumura:~/workspace \$ bin/rake routes

Prefix	Verb	URI Pattern	Controller#Action
welcome_index	GET	/welcome/index(.:format)	welcome#index
root	GET	/	welcome#index

アクション追加

ファイルツリーでarticles_controller.rbファイルを開きます

```
app/controllers/articles_controller.rb
```

newメソッドを追加

```
class ArticlesController < ApplicationController
  def new
  end
end
```

エラー確認

/articles/new にアクセス

The screenshot shows the Cloud9 IDE interface. The left sidebar displays the project structure under 'Workspace'. The main area shows a browser window with the URL <https://rails-tutorial-sugumura.c9users.io/articles/new>. The browser title bar shows tabs for database.yml, routes.rb, and articles_controller. The page content is a red header 'Template is missing' followed by a message in red text: 'Missing template articles/new, application/new with {:locale=>[:en], :formats=>[:html], :variants=>[], :handlers=>[:erb, :builder, :raw, :ruby, :coffee, :jbuilder]}. Searched in: * "/home/ubuntu/workspace/app/views"'. Below this, a code snippet from 'articles_controller.rb' is shown, highlighting line 46 where the error occurred. The code snippet includes lines 44 through 49. The bottom part of the interface shows a terminal window with the command 'bin/rake routes' and its output, which includes the route 'welcome_index GET /welcome/index(:format)'.

```
Extracted source (around line #46):  
44  
45     def find(*args)  
46         find_all(*args).first || raise(MissingTemplate.new(self, *args))  
47     end  
48  
49     def find_all(path, prefixes = [], *args)  
  
Rails.root: /home/ubuntu/workspace  
  
Application Trace | Framework Trace | Full Trace  
  
bash - "sugumura: ~/workspace $ bin/rake routes  
Running via Spring preloader in process 7513  
Prefix Verb URI Pattern Controller#Action  
welcome_index GET /welcome/index(:format) welcome#index  
root GET / welcome#index
```

ビュー追加

ファイルツリーで新規ファイルnew.html.erbを作成

```
app/views/articles/new.html.erb
```

/articles/newにアクセスすると真っ白ページ

フォームを追加

/articles/new に記述

```
<%= form_for :article, url: articles_path do |f| %>
  <div>
    <div><%= f.label :title %></div>
    <div><%= f.text_field :title %></div>

    <div><%= f.label :body %></div>
    <div><%= f.text_area :body %></div>

    <div><%= f.submit %></div>
  </div>
<% end %>
```

フォーム表示

The screenshot shows the Cloud9 IDE interface for a Rails application. The left sidebar displays the project structure:

- rails-tutorial
- .c9
- app
 - assets
 - controllers
 - concerns
 - application_controller
 - articles_controller
 - welcome_controller
 - helpers
 - mailers
 - models
 - views
 - articles
 - new.html.erb
 - layouts
 - welcome
- bin
- config
 - environments
 - initializers
 - locales
 - application.rb
 - boot.rb
 - database.yml
 - environment.rb
 - routes.rb
 - secrets.yml
- db
- lib
- log
- public

```
sugumura:~/workspace $ bin/rake routes
Running via Spring preloader in process 7513
      Prefix Verb   URI Pattern          Controller#Action
welcome_index GET   /welcome/index(.:format) welcome#index
               root GET    /                 welcome#index
articles GET   /articles(.:format)         articles#index
          POST   /articles(.:format)        articles#create
new_article GET   /articles/new(.:format)    articles#new
edit_article GET   /articles/:id/edit(.:format) articles#edit
article GET   /articles/:id(.:format)       articles#show
          PATCH  /articles/:id(.:format)       articles#update
```

アクションの追加

- ・「Save Article」ボタンを押す
- ・エラー 「The action 'create' could not be found for ArticlesController」
- ・Articlesコントローラーにcreateアクションを追加

createアクション

```
# app/controllers/articles_controller.rb
class ArticlesController < ApplicationController
  def new
  end

  def create # 追加
  end
end
```

エラー画面について

送信内容はエラー画面や、ログに表示

The screenshot shows the Cloud9 IDE interface for a Ruby on Rails application named "rails-tutorial".

Workspace: The left sidebar displays the project structure:

- .c9
- app
 - assets
 - controllers
 - concerns
 - application_controller.rb
 - articles_controller.rb
 - welcome_controller.rb
 - helpers
 - mailers
 - models
 - views
 - articles
 - new.html.erb
 - layouts
 - welcome
- bin
- config
 - environments
 - initializers
 - locales
 - application.rb
 - boot.rb
- database.yml
- environment.rb
- routes.rb
- secrets.yml

モデル作成

データベースに保存するため、モデルコマンドを実行

```
$ bin/rails g model Article title:string body:text  
  invoke  active_record  
  create    db/migrate/20160721151502_create_articles.rb  
  create    app/models/article.rb  
  invoke  test_unit  
  create    test/models/article_test.rb  
  create    test/fixtures/articles.yml
```

マイグレーション

マイグレーションを実行して、データベースにテーブルを作成

```
$ bin/rake db:migrate  
== 20160721151502 CreateArticles: migrating =====  
-- create_table(:articles)  
  -> 0.0028s  
== 20160721151502 CreateArticles: migrated (0.0033s) ==
```

データベース確認

```
$ sqlite3 db/development.sqlite3

sqlite> .table
articles          schema_migrations

sqlite> .schema articles
CREATE TABLE "articles" (
    "id" INTEGER PRIMARY KEY AUTOINCREMENT NOT NULL,
    "title" varchar, "body" text,
    "created_at" datetime NOT NULL,
    "updated_at" datetime NOT NULL
);
```

createアクション

保存処理を追加

```
# app/controllers/articles_controller.rb
def create
  @article = Article.new(params[:article])
  @article.save

  # /articles/new にリダイレクト
  redirect_to @article
end
```

送信テスト

タイトルとボディに文字を入力して送信

The screenshot shows the Cloud9 IDE interface. On the left, the workspace sidebar lists files and directories. In the center, a browser window displays an error message: "ActiveModel::ForbiddenAttributesError in ArticlesController#create". Below the error message, the extracted source code for the create action is shown, with line 6 highlighted:

```
def create
  @article = Article.new(params[:article])
  @article.save
  redirect_to @article
```

The Rails root directory is set to "/home/ubuntu/workspace". Below the error message, there are links for "Application Trace", "Framework Trace", and "Full Trace", and a link to the controller file "app/controllers/articles_controller.rb:6:in `create'". At the bottom, a terminal window shows some command-line help text.

項目ホワイトリスト

Mass Assignment 脆弱性への対応 送信項目を明示的に記述

```
# app/controllers/articles_controller.rb
def create
  @article = Article.new(article_params)
  @article.save

  # /articles/new にリダイレクト
  redirect_to @article
end

private
  def article_params
    params.require(:article).permit(:title, :body)
  end
```

送信テスト

タイトルとボディに文字を入力して送信

エラー 「The action 'show' could not be found for
ArticlesController」

データベースには保存済み

```
sqlite> SELECT * FROM articles;
1|test|test|2016-07-21 16:29:15.555148|2016-07-21 16:29:15.555148
```

showアクション

```
# app/controllers/articles_controller.rb

def show
  @article = Article.find(params[:id])
end

def new
  ...
end
```

showビュー

show.html.erbを作成

```
<!-- app/views/articles/show.html.erb -->
<div>
  <strong>Title:</strong>
  <%= @article.title %>
</div>

<div>
  <strong>Text:</strong>
  <%= @article.body %>
</div>
```

送信テスト成功！

記事一覧を表示

/articles で投稿記事の一覧を表示

- コントローラーにindexアクションを追加
- ビューに一覧を展開

index

```
# app/controllers/articles_controller.rb
def index
  @articles = Article.all
end

def show
...
end
```

```
# app/views/articles/index.html.erb


| Title                | Body                |
|----------------------|---------------------|
| <%= article.title %> | <%= article.body %> |


```



- ▶ assets
- ▶ controllers
- ▶ helpers
- ▶ mailers

- ▶ models
 - ▶ concerns
 - ▶ .keep
 - ▶ article.rb

- ▶ views
 - ▶ articles
 - ▶ index.html.erb
 - ▶ new.html.erb
 - ▶ show.html.erb
 - ▶ layouts
 - ▶ welcome

- ▶ bin

- ▶ config
 - ▶ environments
 - ▶ initializers
 - ▶ locales

- ▶ application.rb
- ▶ boot.rb
- ▶ database.yml
- ▶ environment.rb
- ▶ routes.rb
- ▶ secrets.yml

- ▶ db
 - ▶ migrate
 - ▶ development.sqlite3

- ▶ schema.rb
- ▶ seeds.rb

- ▶ lib

- ▶ log

- ▶ public

- ▶ test



おつかれさまでした！

今回のチュートリアル

実は公式のGetting Started ぜひ続きを試してください

[Rails をはじめよう \(日本語訳\)](#)

次回？のためのアンケート

- ・ 今回のチュートリアルの続き
- ・ 他言語/フレームワークなどのハンズオン
 - PHP/Javascript/Java/Python/Ruby/Swift...
- ・ 開発ツールの紹介
 - バージョン管理/プロジェクト管理/コミュニケーションツール/CI
- ・ クラウドコンピューティング
 - AWS/GCP/Azure

アンケート結果

- 今回の続き: 10
- Javascript: 5
- Python: 4
- Swift: 3
- git: 3
- SQL: 1