

ls - la

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## Rails Project

① Creation of new project

1. ② Ruby vs Rails

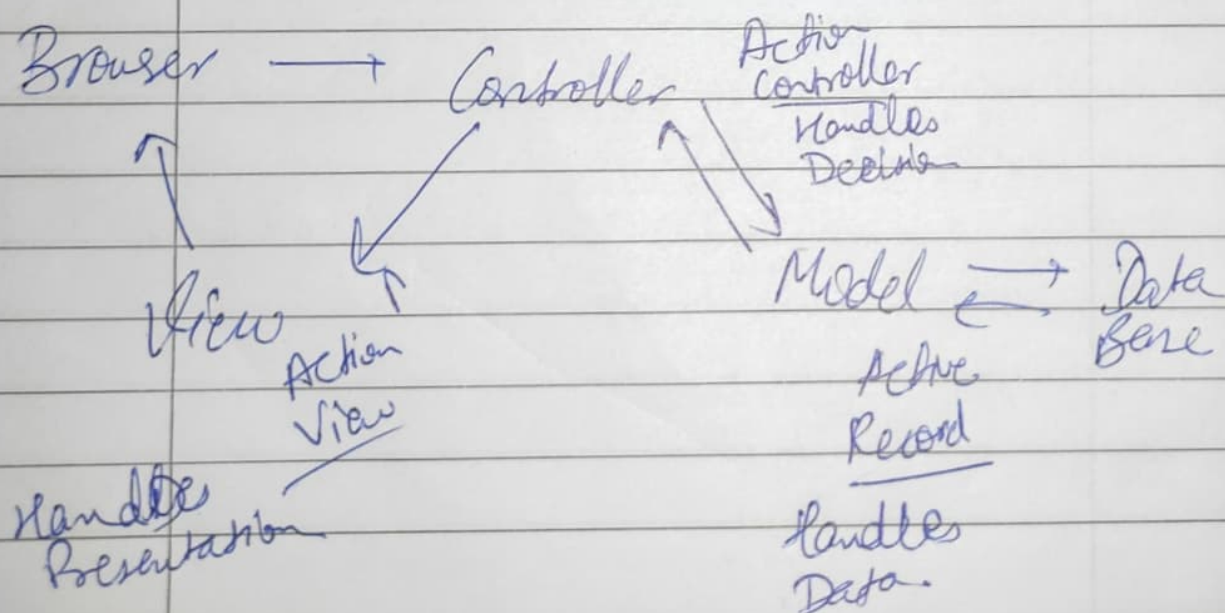
Framework →

A set of code libraries & data structures that provide generic functionality that can be used overriden or further specialised.

DRY

Convention over configuration

1.2 MVC Architecture



# Content management system CMS

2.1 New Project creation ~~like~~ same as 1

2.2 File structure of Ruby on Rails Project.

app helpers → new helpers

inside  
before  
✓6  
assets → images, css,  
javascript

config

db

public

gemfile

2.3 Configure a project

application.rb

inflection.rb → tell ruby how to  
pluralize some words,

config/ development.rb, test.rb, production.rb,



## Access the Project.

\_\_/\_\_/\_\_

2.4

Access the Project  
localhost:3000

2.5

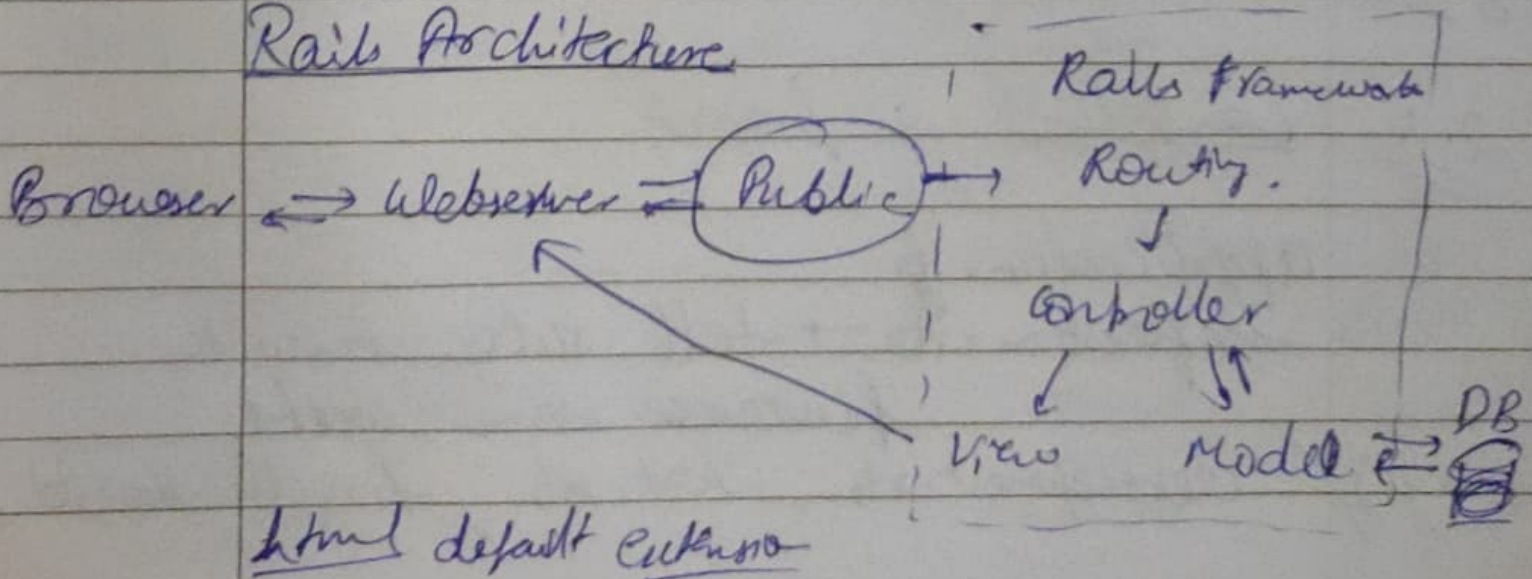
Generate a controller and a view.  
rails generate controller Demo  
index  
view

- do method in controller is action
- layout false.  
render the view back to browser.
- config/routes.rb

2.6

Server Request Handling.

### Rails Architecture.



## 2.7 Routes

- simple match routes.
- Default route
- Root route
- Resourceful route.

### ① Simple match routes. get "demo/index"

match "demo/index", :to => "demo#index", :via => :get

get request  
retrieve info.

post request  
give info

### 2. Default Route

:controller/:action/:id.  
GET /students/edit/52

match ':controller(/:action(/:id))', :via => :get

### 3 Root Route - Route to Route if no route is matched root "demo#index"

match "/", :to => "demo#index", :via => :get.





- \_/\_/\_
- ~~redirect~~ to (:controller => 'demo', :action => 'index')
  - ~~redirect~~ redirect to (controller: 'demo', action: 'index')
  - redirect to (:action => 'index')  
↳ assumes same controller.
  - redirect to ('https://nytimes.com')

### 8.3 View Templates

ERB → Embedded Ruby.

hello.html.erb

Template name: hello

Process with: ERB

Output file: html.

ERB tags      `<%= code %>`      checks Ruby  
code

`<%= code %>`

↳ execute Ruby code but  
also output result in template.

Prints result

puts → to the console



## 3.4 Instance Variable

@assign <sup>scope</sup> throughout ~~instance~~ of  
life of instance.

→ access to it inside the template

controller → view only  
not view to controller

## 3.5 Links

### Creating Links

<a href = "/demo/index">click now</a>

↳ <sup>↳ route</sup> not common as there is helper method  
to make link creation easier.

<%= link\_to (text, target) %>

target → • "/demo/index"

• { :controller → 'demo', :action → 'index' }

• { :action → 'index' }

↳ current controller.

### 3.6 URL Parameters

Parameters hash in Rails,  
:controller  $\Rightarrow$  'demo'  
:action  $\Rightarrow$  'hello'

Parameters { :id  $\Rightarrow$  1  
:name  $\Rightarrow$  'Kevin' }

params  $\rightarrow$  object get value  
Post values.

contains all

params[:id] or params['id']

id has provided position

### 3.7 Exercise

### 3.8 Solution

$\langle \text{mailto} = \text{mail\_to} ("mail") \% \rangle$   
helper



4.1

## Database

rails db:schema:dump.

4.2

## Migrations

- Can use legacy database tables
- Can manually manage database table.
- Can use Rollback migrations. ✓

describe database changes

- keeps database schema with app code.
- share database schema.
- Executable and Repeatable.
- helps with version control system.
- Allows writing Ruby instead of SQL.

4.3

## Generate Migrations

- change is shorthand for  
up and down method.

```
def change  
end
```

```
def up  
end  
def down  
end
```

## 4 Running migration.

Puts command to print some message in migration result.

schema-migrations

↳ version

↳ contains timestamps.

rails db:migrate VERSION = 0

↳ rollback all migrations

## 5 Exercise

5.1 Active Record & Active Relation.  
    core                      when

5.2 Rails console  
    rails c -e development

5.3 Create Record

• new + save

3 step process

initialize value,  
create

• Create

new Record?



S.4.

## Update Record

- find + save  $\Rightarrow$  3 step
- find + update  $\Rightarrow$  2 step

S.5

## Delete Record

## S.6 Find Records

Primary key finder.

↳ classname.find(Pk)

• where (: visible  $\Rightarrow$  true)

• where ("visible = 1 and position < 10")

• where ("first\_name LIKE ?", @query)

↳ Placeholder  
Good Practice

↳ object omit.

• order ('position ASC')

• limit (20)

• offset (100)

↳ starting from

5.7

## One to Many Associations

FK

- ← • Create relationship in database
- ← • Define relationship in models, both sides.
- Use Relationship.

has many  
belongs to

subject. pages.

• << page

← append method

• delete (page)

• empty?

• size

6.1

## CRUD

- Separate Controllers.
- Plural names for controllers.
  - ↳ Subjects Controllers, Pages Controllers.
- Often: One Controller per model.

model ⇒ singular names.

resource oriented approach

↳ Object



6.2

## Rest and Resourceful Routes.

REST → Representational State transfer

↳ Instead of performing procedures, perform state transformation upon resources.  
↳ think about and structure our code

### HTTP Verbs.

Verb.	Objective	
GET	Retrieve item from resource	links
POST	Create new item in resource	forms
PATCH	Updating existing item in resource	forms.
Delete	Deleting existing item in resource	links, forms

### ↳ Resourceful Routes.

- Rails Default.
- Used by many professional developers.

- Optimizes for ~~rest~~ REST
- Simple, consistent, organized structure.
- Improves application security.

## Resourceful Routes (RR)

resources : subjects

resources : pages.

## Omnitesting RR

- resources : students, :excepts => [:show]  
 , only => [:index, :show]

- Adding RR.

resources : students do

member do  
 get :delete  
 end

member  
 ↳ specific  
 item in table

collection do  
 get :export  
 end

collection  
 ↳ on the  
 whole table

end

view  
 on id

do not  
 receive id.