



Ruby on Rails

Jeremy Lightsmith

Section I - Intro

- Hopes & Fears
- Intro
- Install Rails
- Watch the Ball
- Instant Gratification
- About Rails

Hopes & Fears

Intro

What is Rails?

Web Framework

ActionPack

ActiveRecord

ActiveSupport

ActionMailer

ActiveResource

Convention over Configuration

Don't
Repeat
Yourself

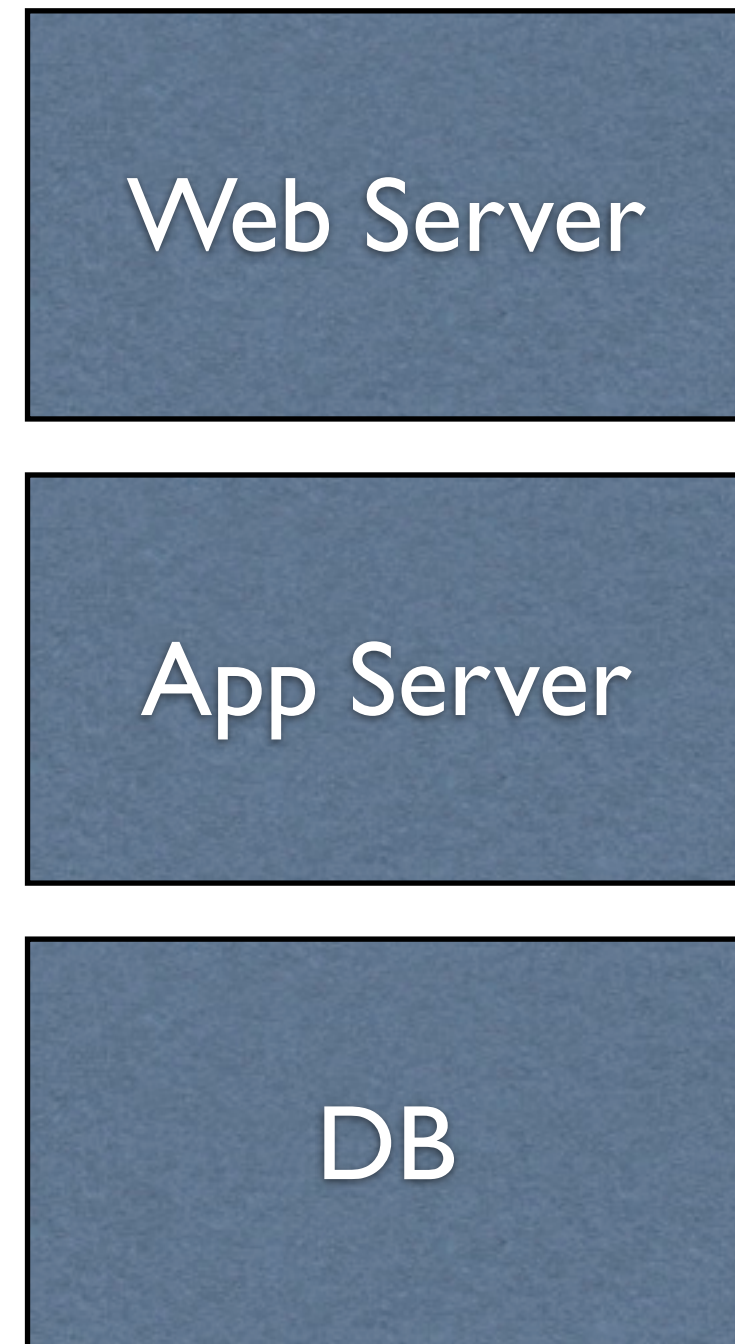
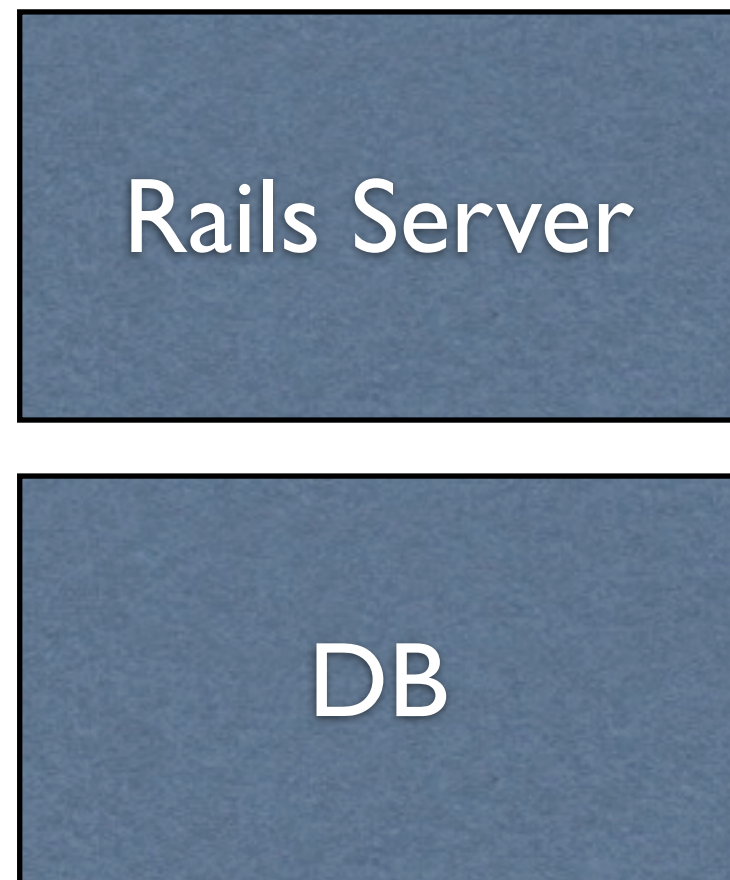
Domain Specific Languages

“magic”
possibly too much

Why is Rails Important?


Simplify

2 Tier vs 3 Tier



Faster

A History Lesson

37signals 

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"Reader's Choice." — **BusinessWeek**

[More praise from the press](#)

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Share files, meet deadlines, assign tasks and centralize feedback.



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Track Your Contacts, Leads, and Deals. Always Be Prepared.

Keep track of past conversations, calls, and emails. Never forget to follow-up.



Highrise®

Track Your Contacts

Organize and Share Information Across Your Business.

The quickest way to create and share information with your whole team.



Backpack®

Organize Your Business

Real-Time Chat, File & Code Sharing for Remote Teams.

Campfire is like instant messaging, but designed specifically for groups.



Campfire™

Chat with Your Group



**David
Heinemeier
Hansson**



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[HOME](#) [PROPOSALS](#) [ABOUT](#) [EXHIBIT HALL](#) [CONNECT](#) [MORE RAILS](#) [YOUR ACCOUNT](#)



RAILSCONF 2010 CALL FOR PARTICIPATION IS NOW OPEN

TWITTER

(OFFICIAL TAG: #RAILSCONF) —

- @jeffcohen sure, RailsConf is probably cool and all. But what about Chicago

- BaseCamp
- CrunchBase
- Github
- Hulu
- Penny Arcade
- Scribd
- Shopify
- Spiceworks
- Twitter
- Urban Dictionary
- XING
- Yellowpages.com

Rails == Agile

This Class

- 10 weeks
- Lecture / Lab ~ 33% / 66%
- Working in rotating pairs
- Grading in class / on board

To Pass

- Attendance
 - 80% of classes
 - 20 min late == absence
- 100% of assignments
- project that meets requirements

Project Requirements

- at least 3 tables / models
- tests (model & controller)
- some client-side javascript
- validation
- login / signup (or equivalent complexity)
- must be “approved”

Resources

- Homework completion sheet
- Mailing List
- The Book
 - Agile Web Developement w/ Ruby on Rails
- <http://apidock.com/>
- jeremy.lightsmith@gmail.com
- 312-953-1193

Install Rails

Pass the Stewie

[Google Search](#)[I'm Feeling Lucky](#)[Advanced Search](#)
[Language Tools](#)

[Information, resources, and ways you can help](#) survivors of the Haiti earthquake.

[Advertising Programs](#) - [Business Solutions](#) - [About Google](#)

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YouTube

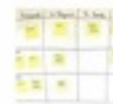
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Dominican Repu...**1 day ago
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aftermath (Warn...**1 day ago
2,513 views
★★★★★
[gmbrenzo](#)**Haiti Earthquake:
Thousands Fear...**19 hours ago
7,020 views
★★★★★
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Now you know how to greet people in Estonian!

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Posted 13 Jan 10

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Instant Gratification

About Rails

Directory Structure

Naming Conventions

script/console

Rails Code

Active Support Extensions

- date / time
 - 5.seconds.ago
 - Date.today.to_s(:db)
- string helpers - pluralize, classify, underscore, etc
- blank?

Environments

Section 2 - Models

- database.yml
- Migrations
- Active Record Models
- Active Record Relationships
- Active Record Validations

database.yml

Migrations

script/generate model post

Active Record Models

Active Record Relationships

belongs_to

has_many

has_one

has_many :through

Active Record Validations

`validates_presence_of`
`validates_uniqueness_of`
`validates_length_of`
...

Section 3 - Agile Practices

- Testing in Rails (5)
- Red, Green, Refactor (15)
- Ping Pong Pairing (60)
- Going Further (5)
- Test Models (60)
- Fixtures (10)

Testing in Rails

test/
 fixtures/
 functional/
 integrational/
 performance/
 unit/
 test_helper.rb

Red, Green, Refactor

Make it fail,

Make it pass

Make it clean

Refactoring?

changing

STRUCTURE
!BEHAVIOR

Ping Pong Pairing

Going Further

What to test?

*Stuff to know about that
we won't use here*

Behavior Driven Design

rSpec

Shoulda

Acceptance Test Driven Design

Cucumber

Autotest

Test Models

Fixtures

Section 4 - Controllers

- Retrospective (20)
- Routes (20)
- REST (20)
- RESTful Controllers & Views (1:30)

Retrospective

Routes

Review :
Pass the Stewie

example 4.1

REST

It's about the internet

every **RESOURCE**
has **ONE** name

txt
xml **vml**
html **pdf**

different versions of
same resource

consistent **VERBS**
to access **RESOURCES**

GET
PUT **POST**
DELETE

POST

GET

PUT

DELETE

CREATE

READ

UPDATE

DELETE

CRUD	REST verb	Rails method
create	POST	create (new)
read	GET	show, index
update	PUT	update (edit)
delete	DELETE	destroy

example 4.2

RESTful Controllers & Views

watch Jeremy code

get music project
building & running

homework 4.3

Section 5 - Views

- About Views
 - Templates, Partials, Layouts, Helpers
- CSS
- Other view options
- Pagination

About Views

Templates

<% “something” %>

vs

<%= “something” %>

`<%=h params[:name] %>`

Partials

Layouts

Helpers

CSS

HTML == Structure

CSS == Style

```
.album .about h1 {  
    font-size: 22px;  
    margin-top: 0;  
}
```

Pagination

Will Paginate

http://wiki.github.com/mislav/will_paginate/

In your controller...

```
@posts = Post.paginate :page => params[:page],  
                        :order => 'created_at DESC'
```

In your view...

```
<%= will_paginate @posts %>
```

Other View Options

ERB

```
<div id="profile">
  <div class="left column">
    <div id="date"><%= print_date %></div>
    <div id="address"><%= current_user.address %></div>
  </div>
  <div class="right column">
    <div id="email"><%= current_user.email %></div>
    <div id="bio"><%= current_user.bio %></div>
  </div>
</div>
```


HAML

```
#profile
  .left.column
    #date= print_date
    #address= current_user.address
  .right.column
    #email= current_user.email
    #bio= current_user.bio
```

Homework

Install Image Magick

- You can tell it works, by downloading and running the music example. It should correctly resize a photo.

Section 6 - Plugins

- Projects?
- Plugins
- Upload/Resize a photo
- Logging In/Out

Projects?

Plugins

Upload/Resize a Photo

Upload a File

Upload a Photo

Resize a Photo

Loggin In / Out

Session

before_filter

helper_method

Section 7 - AJAX

- AJAX
- RJS Templates
- jQuery
- Firebug

AJAX

RJS Templates

jQuery

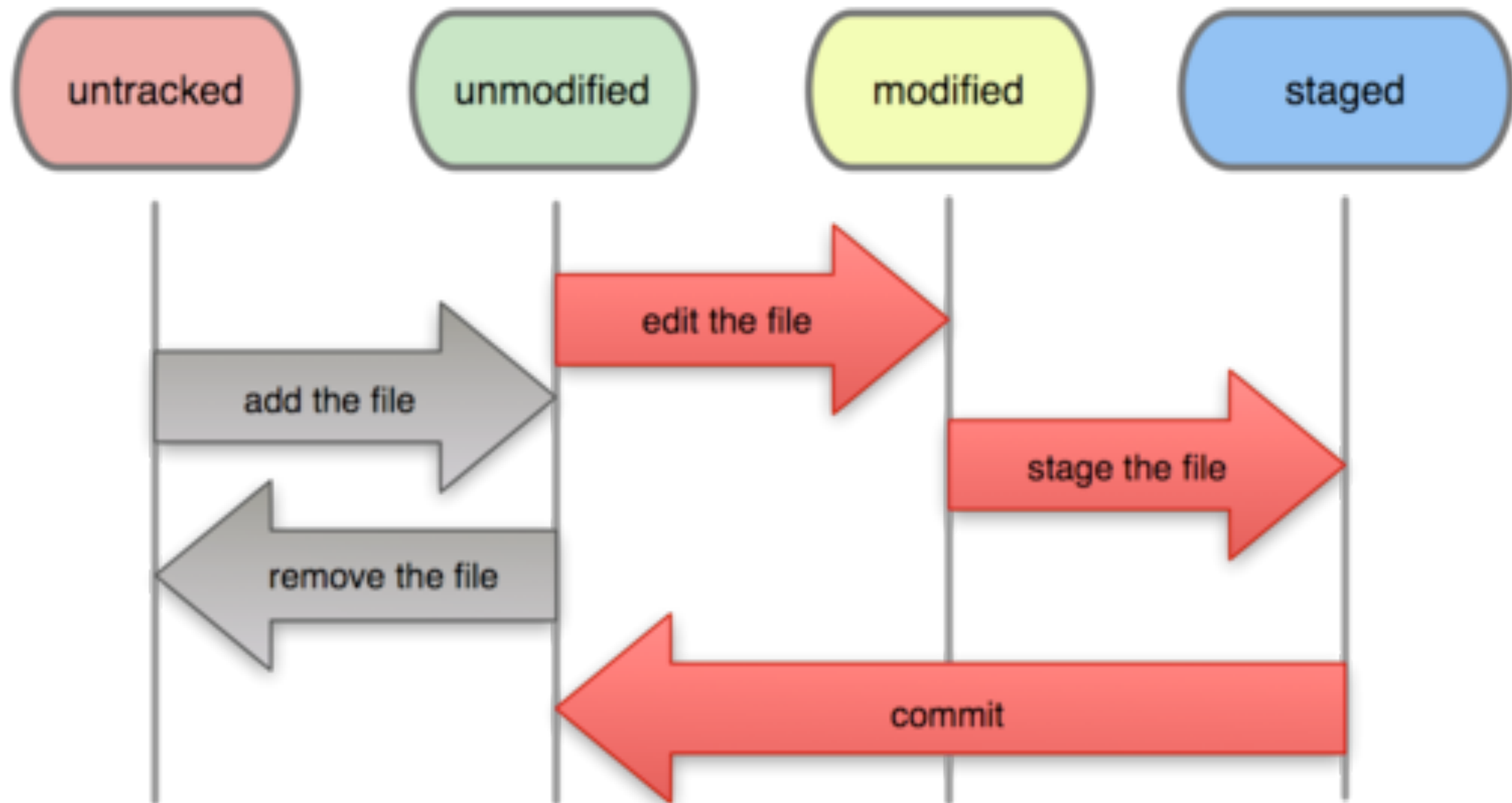
Firebug

Section 8 - Deployment

- GIT
- Heroku
- E-Mail
- LAMP Stack
- Choices

GIT

File Status Lifecycle



<http://progit.org/book/ch2-2.html>

Heroku

Limitations

E-Mail

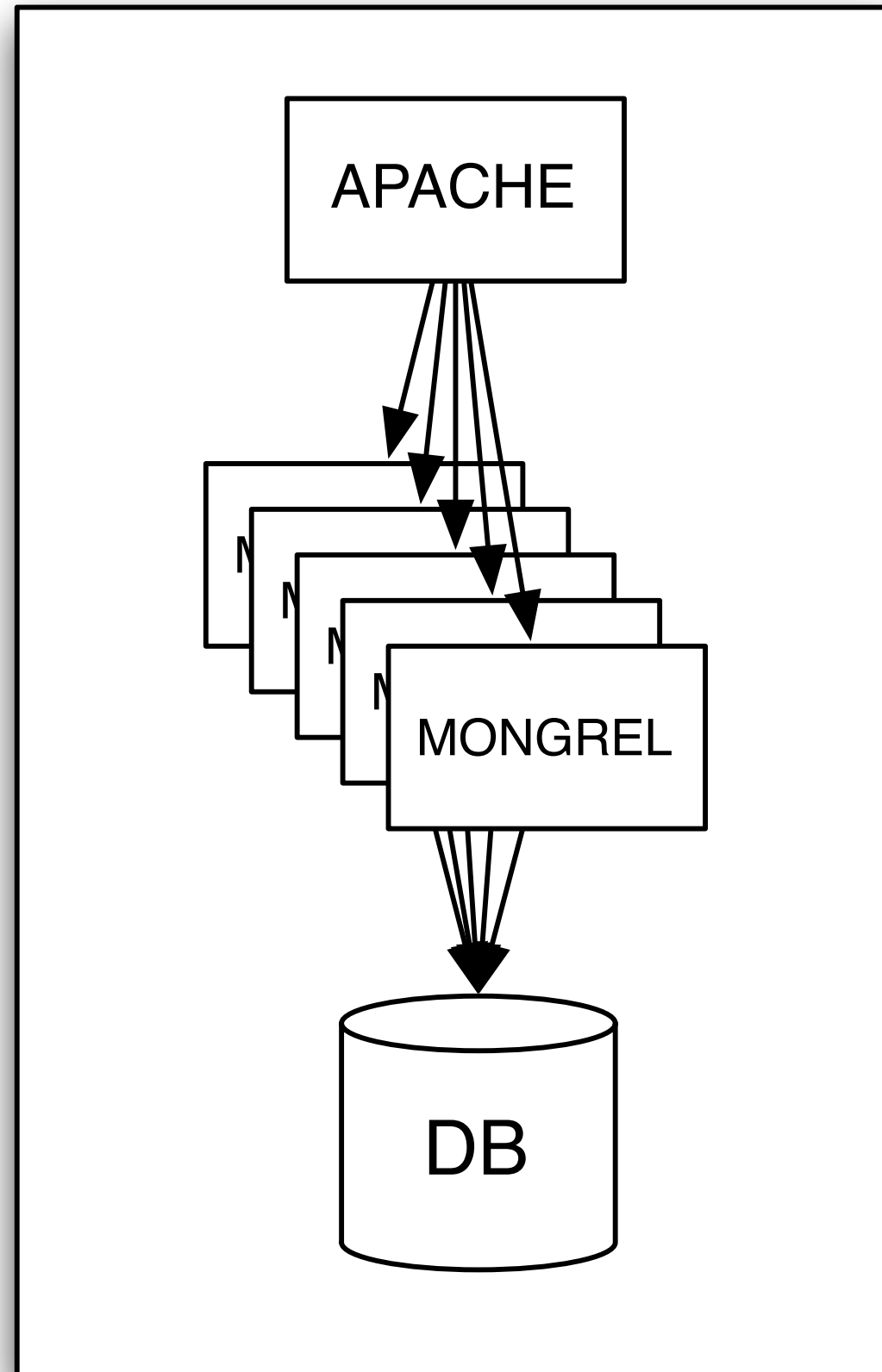
LAMP Stack

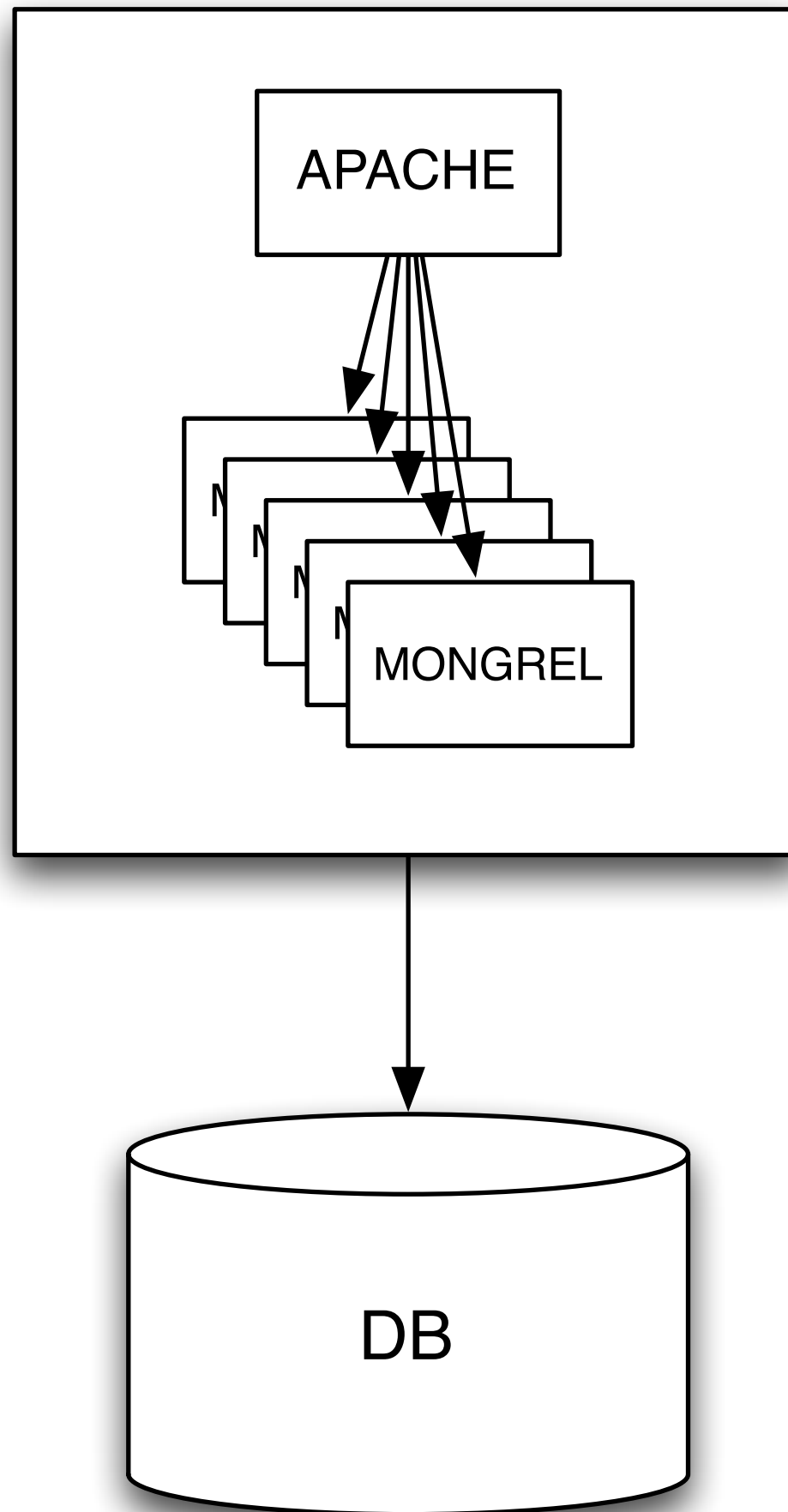
Linux

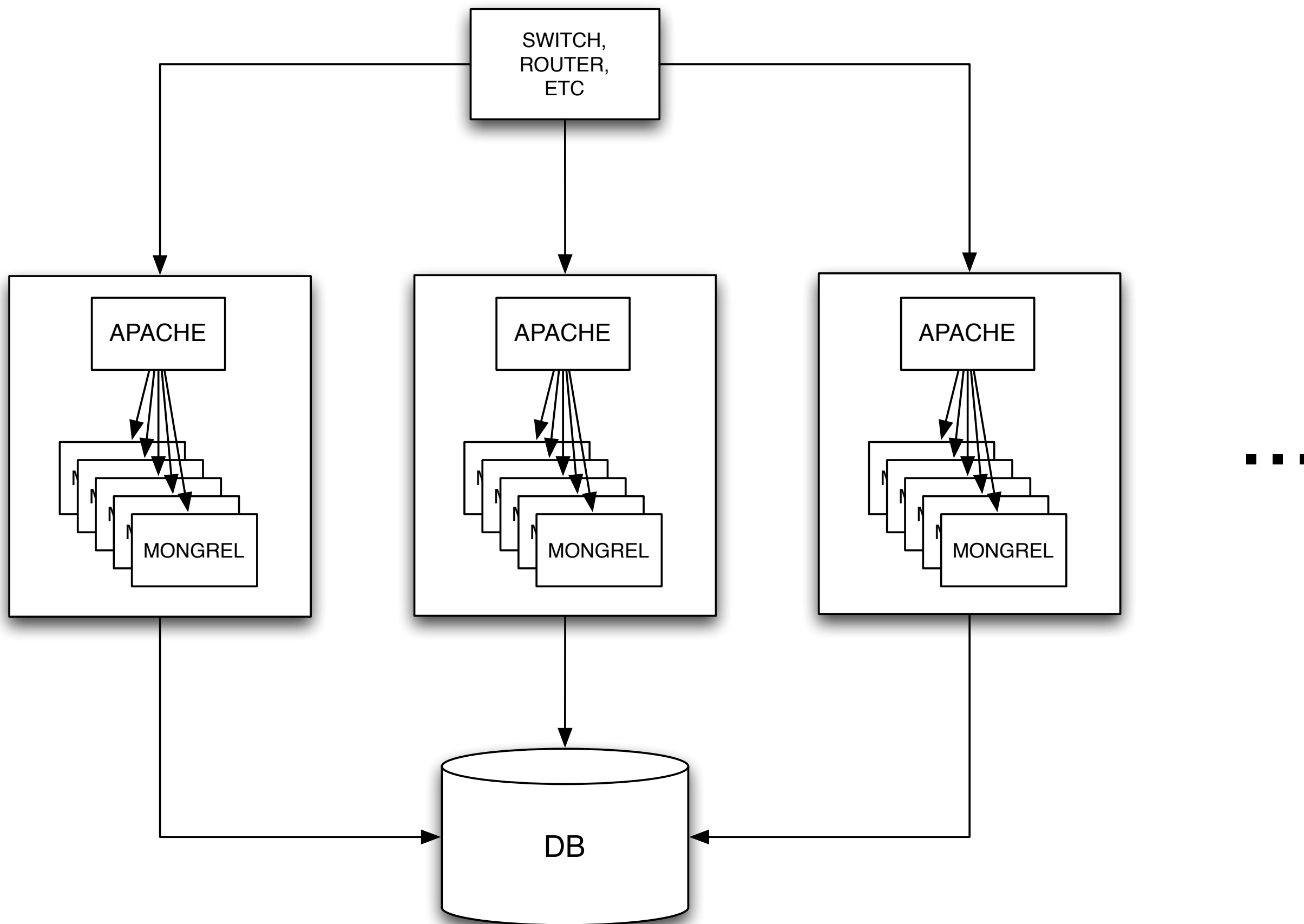
Apache

MySQL

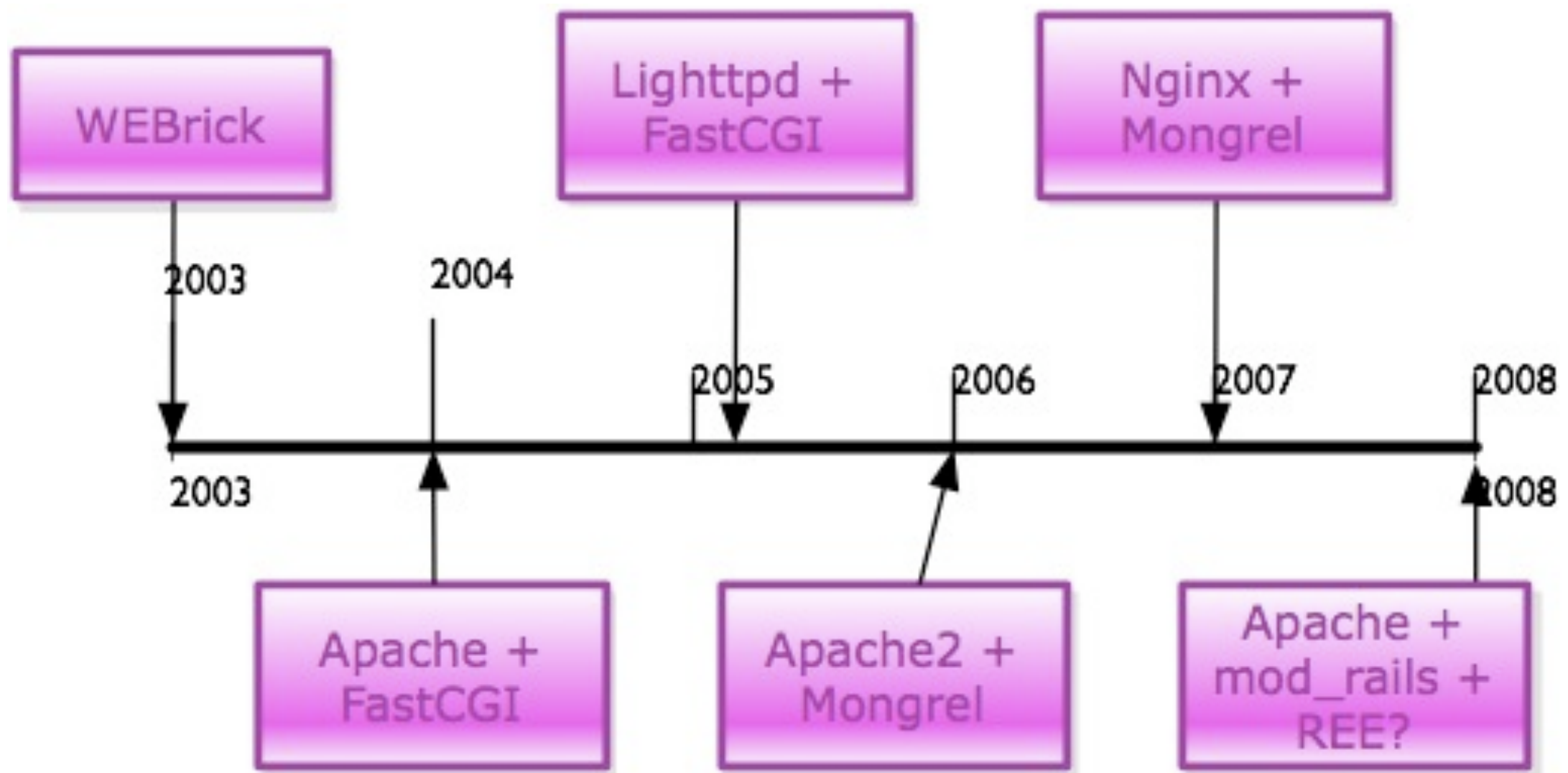
PHP / Python / Perl







Choices



<http://blog.citrusbyte.com/2008/07/18/automate-your-rails-deployment/>

Use Capistrano

Projects? Homework?

Section 9 - Advanced

- Caching
- Searching

Caching

Searching

Section 10 - Project Demos

- Project Demos

Project Demos