

Coding for Development and Social Change, Oct 2014

Ideas into Code

Turning all that theory into
your own applications:
another example app

Prerequisites

- ❖ Rails installed
- ❖ Lectures 3-6 completed

Example: DataDex

- ❖ Design brief:
 - ❖ I have a *lot* of datasets and pointers to datasets in my collections.
 - ❖ I'd like to make them available to more people, but they get lost in big data repositories and existing repository managers are too complicated and difficult to manage for this task.
 - ❖ I want people to be able to find datasets related to a given topic, add datasets of their own, and know where the **cleanest** copy of a dataset is online.
 - ❖ I also want people with low bandwidth to be able to access dataset lists easily.

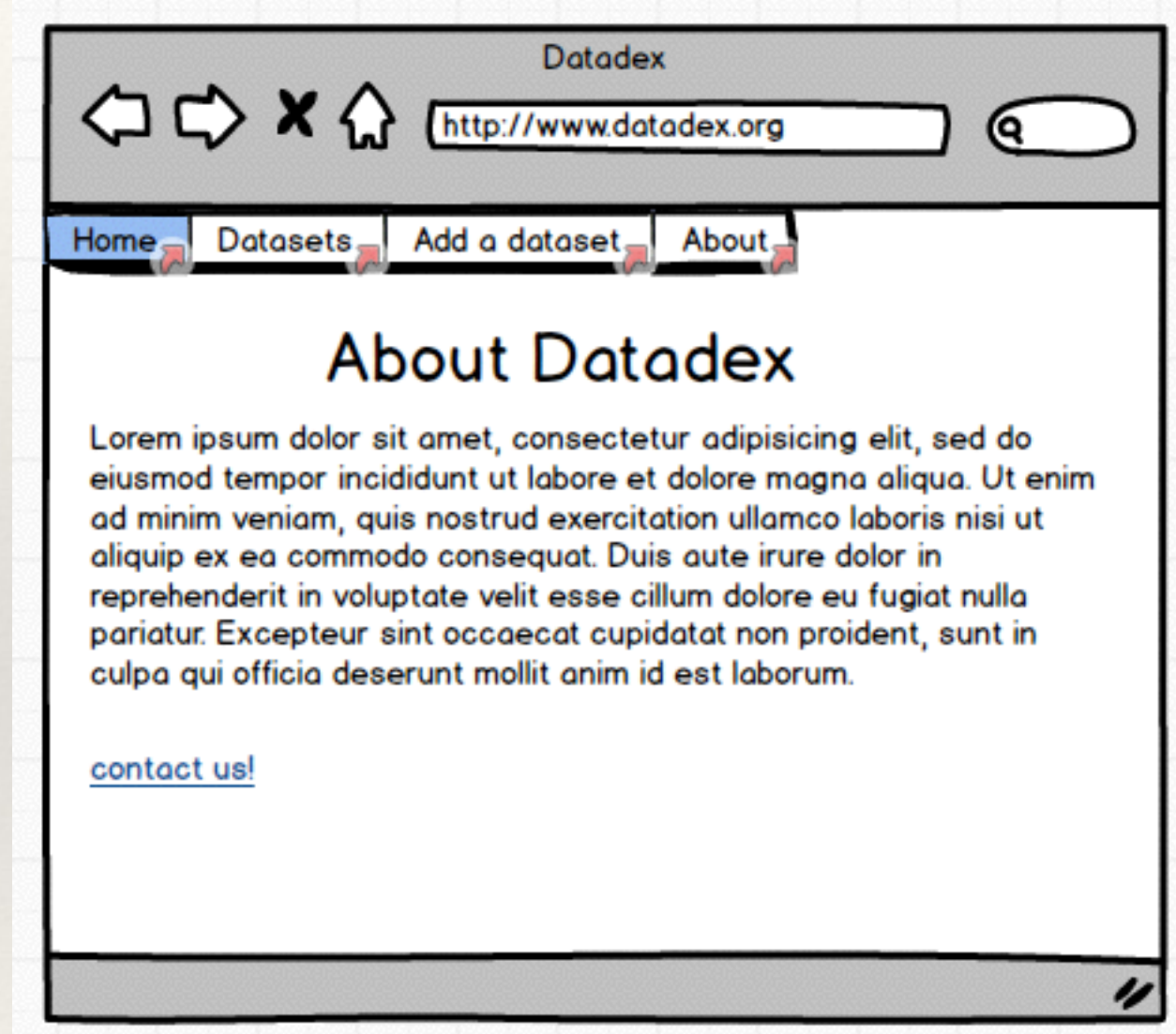
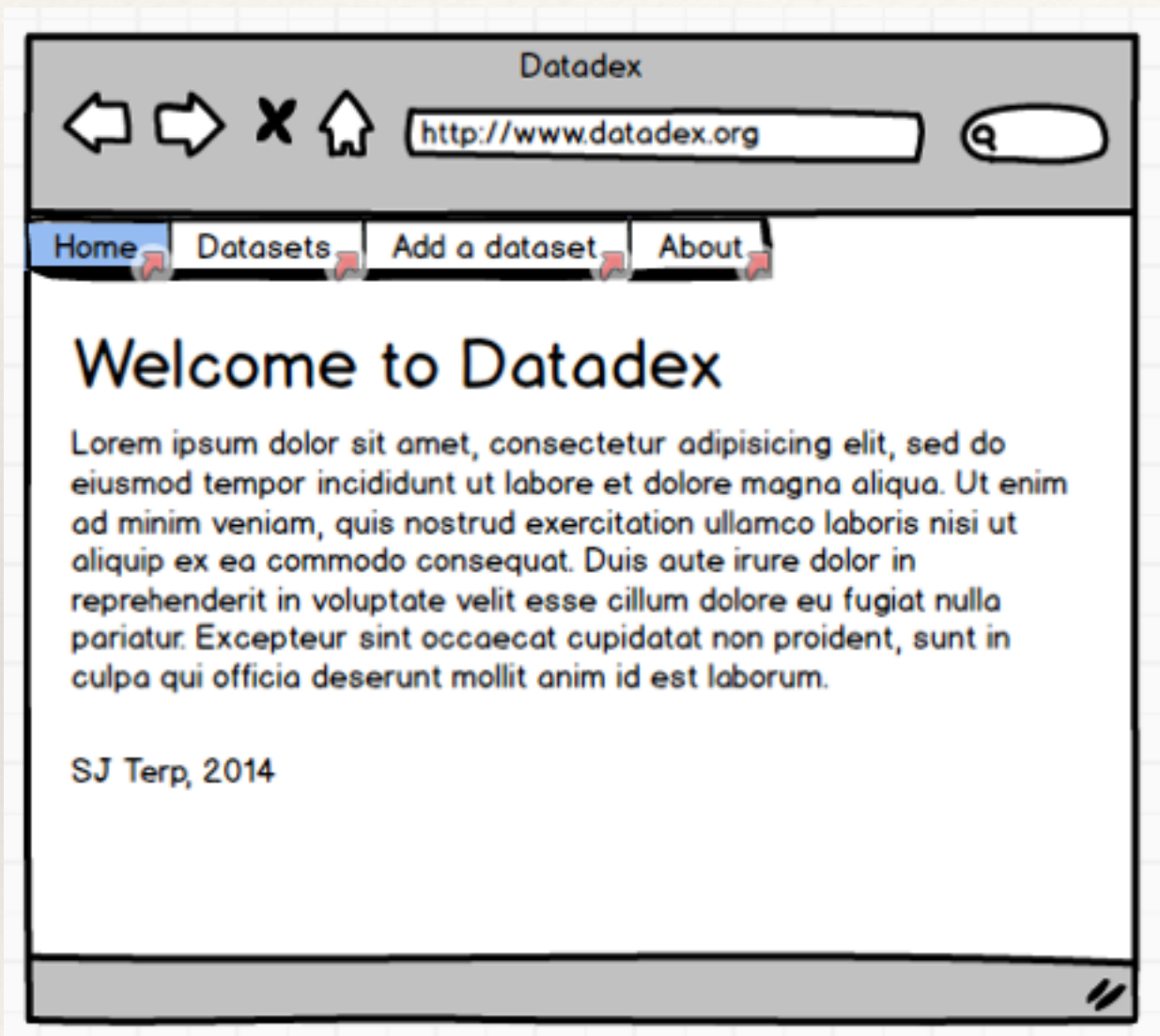
MVP User Stories

- ❖ **As a mapper I want to add a dataset in order to make my dataset available to others**
- ❖ **As a public I want to view all the datasets in order to see what's relevant to me**
- ❖ **As a public I want to download a dataset in order to use it**

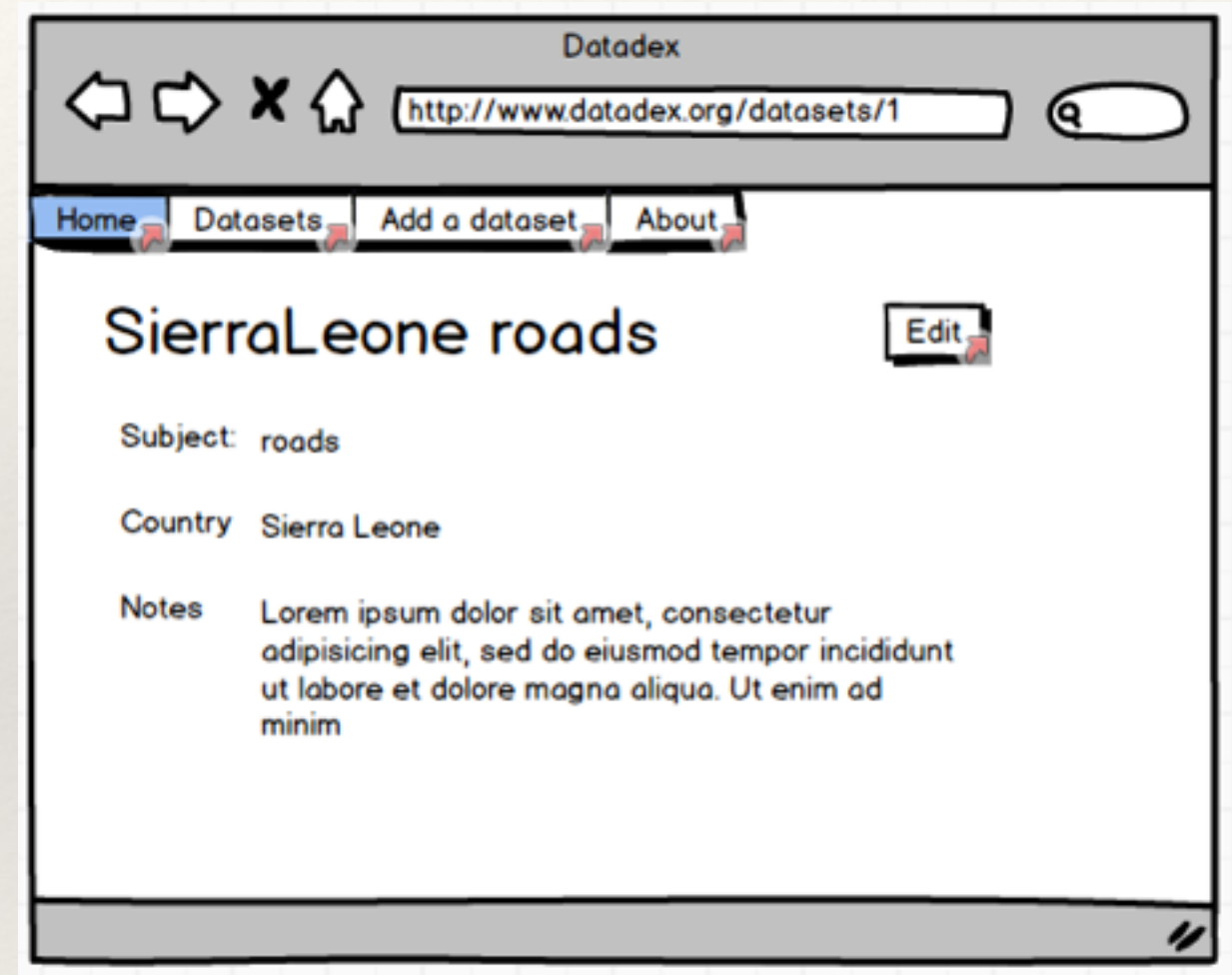
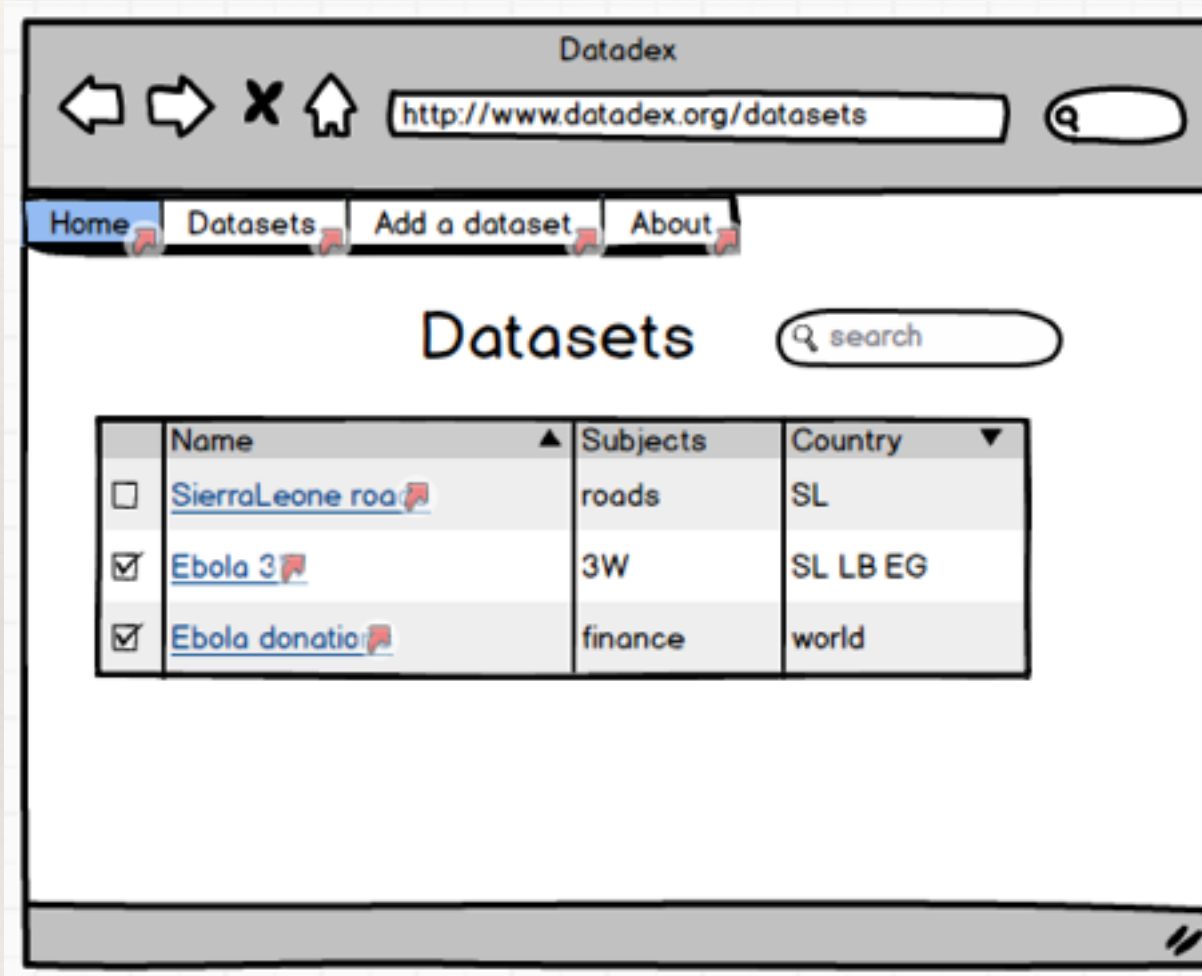
MVP Sitemap

- ❖ Frontpage
- ❖ About
- ❖ List all datasets
- ❖ View a dataset

MVP Wireframes: static pages



MVP Wireframes: dataset views



MVP Wireframes: dataset changes

Datadex

← → × ↗ 🔍

[Home](#) [Datasets](#) [Add a dataset](#) [About](#)

Add a new dataset:

Subject:

Country:

Notes:

Datadex

← → × ↗ 🔍

[Home](#) [Datasets](#) [Add a dataset](#) [About](#)

SierraLeone roads

Subject:

Country:

Notes:

Creating My Application

- ❖ Terminal window: go to workspace
 - ❖ “rails new datadex”
- ❖ Go to github
 - ❖ Create new repository “datadex”

First Controller: Welcome

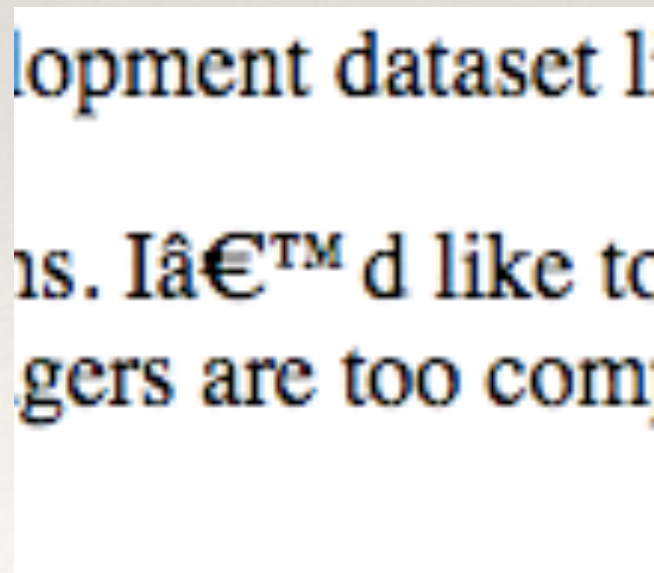
- ❖ In the terminal window, type:

rails generate controller welcome index

- ❖ This creates a controller, a view and a route:
 - ❖ route: “GET welcome/index”
 - ❖ controller: app/controllers/welcome_controller.rb
 - ❖ view: app/views/welcome/index.html.erb
 - ❖ helper: app/helpers/welcome_helper.rb
 - ❖ test: test/helpers/welcome_helper_test.rb
- ❖ Check the route by typing “**rake routes**” in the terminal window
- ❖ Check the view by typing “**rails server**” and going to <http://0.0.0.0:3000/welcome/index>

NB: Character fails...

- ❖ When I wrote my welcome page, I cut and pasted text from my slides.
- ❖ And this happened.
- ❖ It's because keynote uses a slightly different character set to html. It's easily fixed: just delete and retype “ ‘ ” in your html file.



Routes

- ❖ The router file maps the URL that a user types in for your site to the controller that handles that URL
- ❖ If you want to change a route, you need to edit the file `config/routes.rb`
- ❖ We're going to make a small edit in there, to make the welcome page appear when a visitor types in the address of your site (e.g. `http://0.0.0.0:3000/`).
- ❖ Uncomment (remove the “#” from) the line
- ❖ `root 'welcome#index'`
- ❖ Then rails server, and go to `http://0.0.0.0:3000/`

My Models

- ❖ User
- ❖ Dataset
- ❖ Instance
- ❖ Repository

Creating the Dataset model

- ❖ rails generate model Dataset
subjects:text country:string
format:string start:date
end:date notes:text
- ❖ rake db:migrate
- ❖ rails console
 - ❖ Dataset.all

Attribute name	Attribute type	Attribute Length
id	integer	10
name	string	
subjects	text	
country	string	
format	string	
start year	date	
end year	date	
notes	text	
owner id	integer	10

My Model Relations

- ❖ User has-many Datasets
- ❖ Dataset has-many Instances
- ❖ Instance has-one Repository
- ❖ Repository has-many Instances

My Views

- ❖ These views form my non-MVP site map:
 - ❖ Frontpage, about, contact us
 - ❖ User: create, read, update, delete, list
 - ❖ Dataset: create, read, update, delete, list
 - ❖ Instance: create, read, update, delete, list
 - ❖ Repository: create, read, update, delete, list

Look at systems like yours - consider which pages they needed and why