

*Coding for Development and Social Change, Oct 2014*

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# Ideas into Code

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

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# Prerequisites

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- ❖ Rails installed
- ❖ Lectures 3-6 completed

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# Example: DataDex

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- ❖ 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.



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# MVP User Stories

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- ❖ **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**

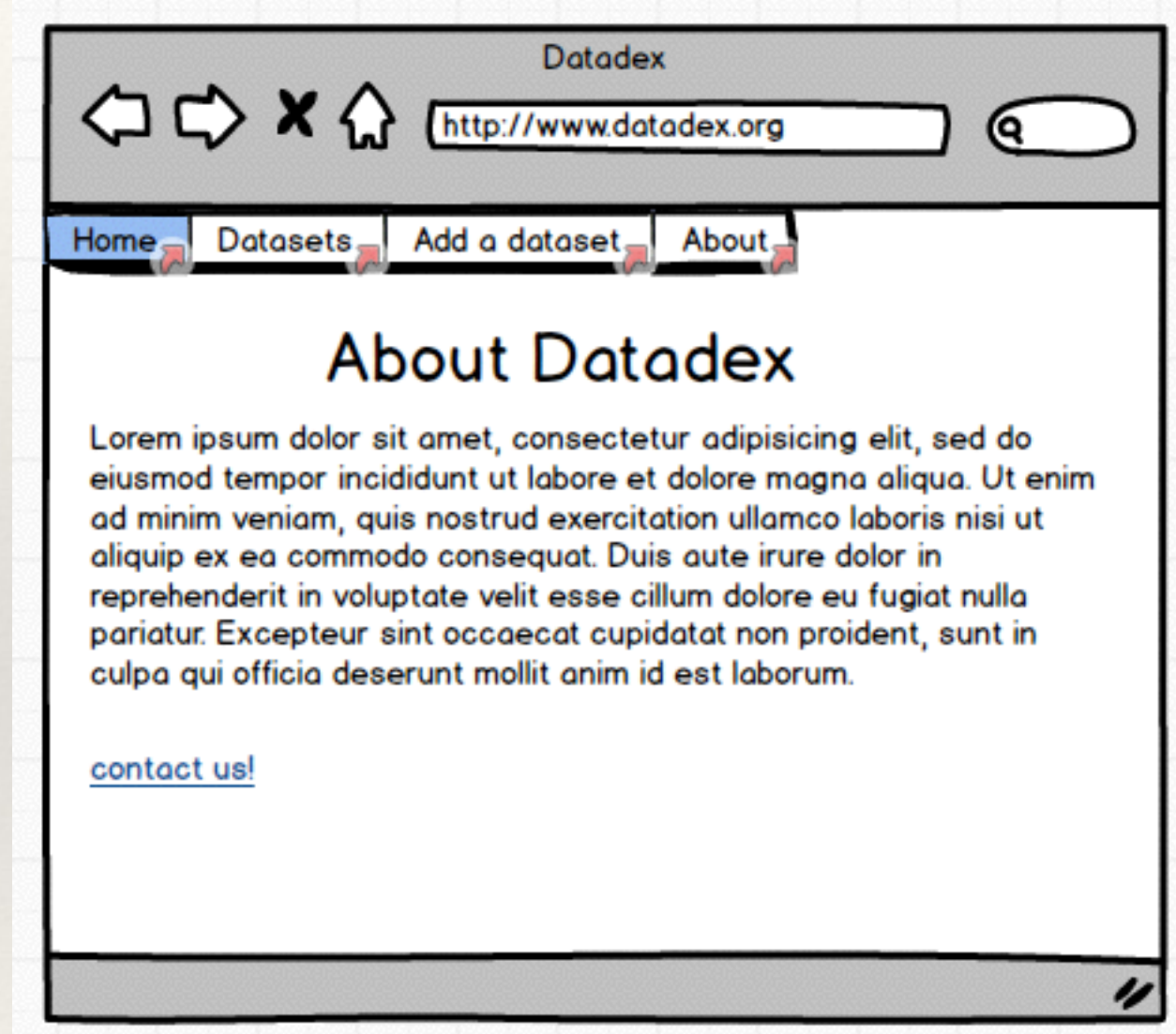
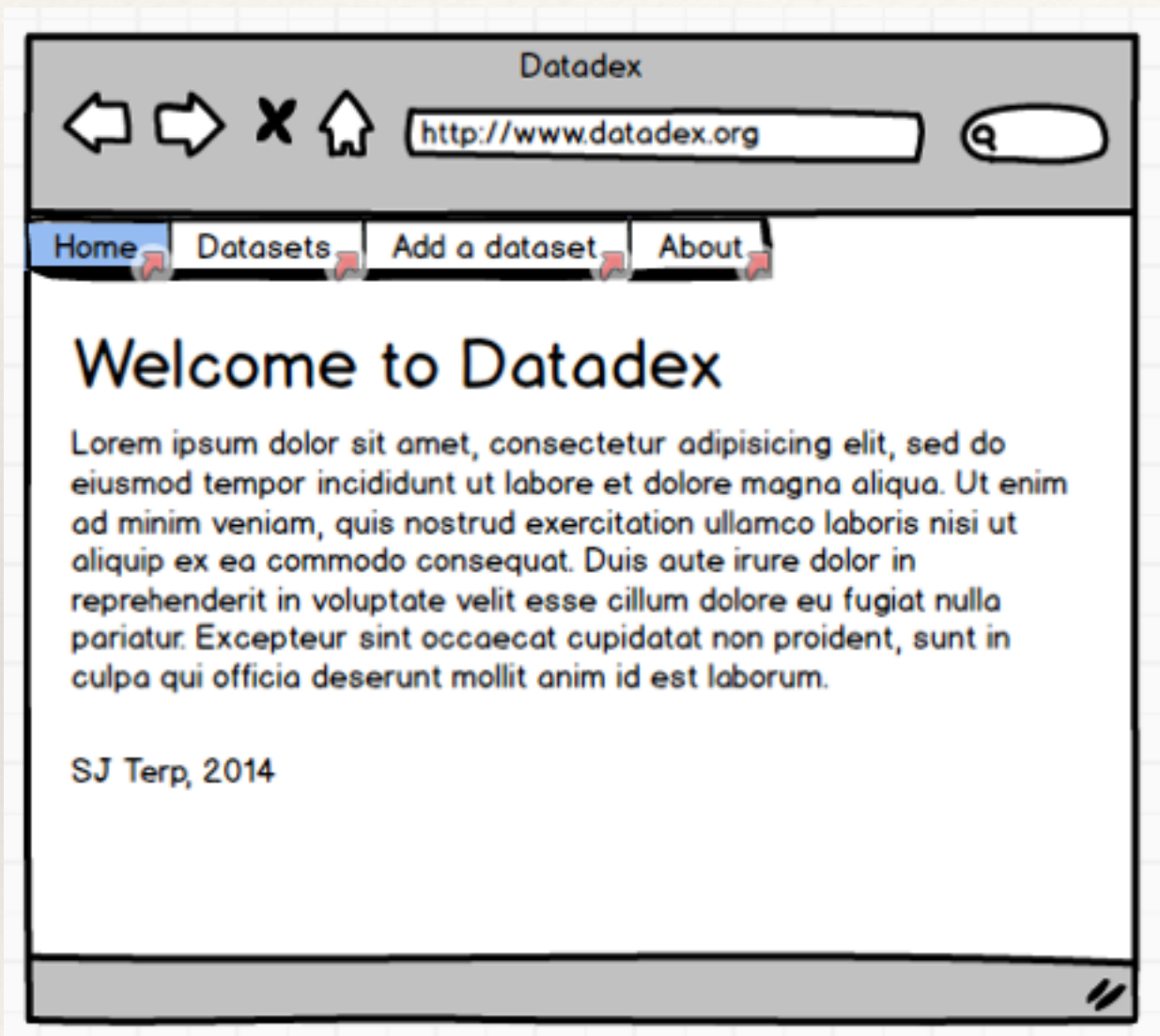
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# MVP Sitemap

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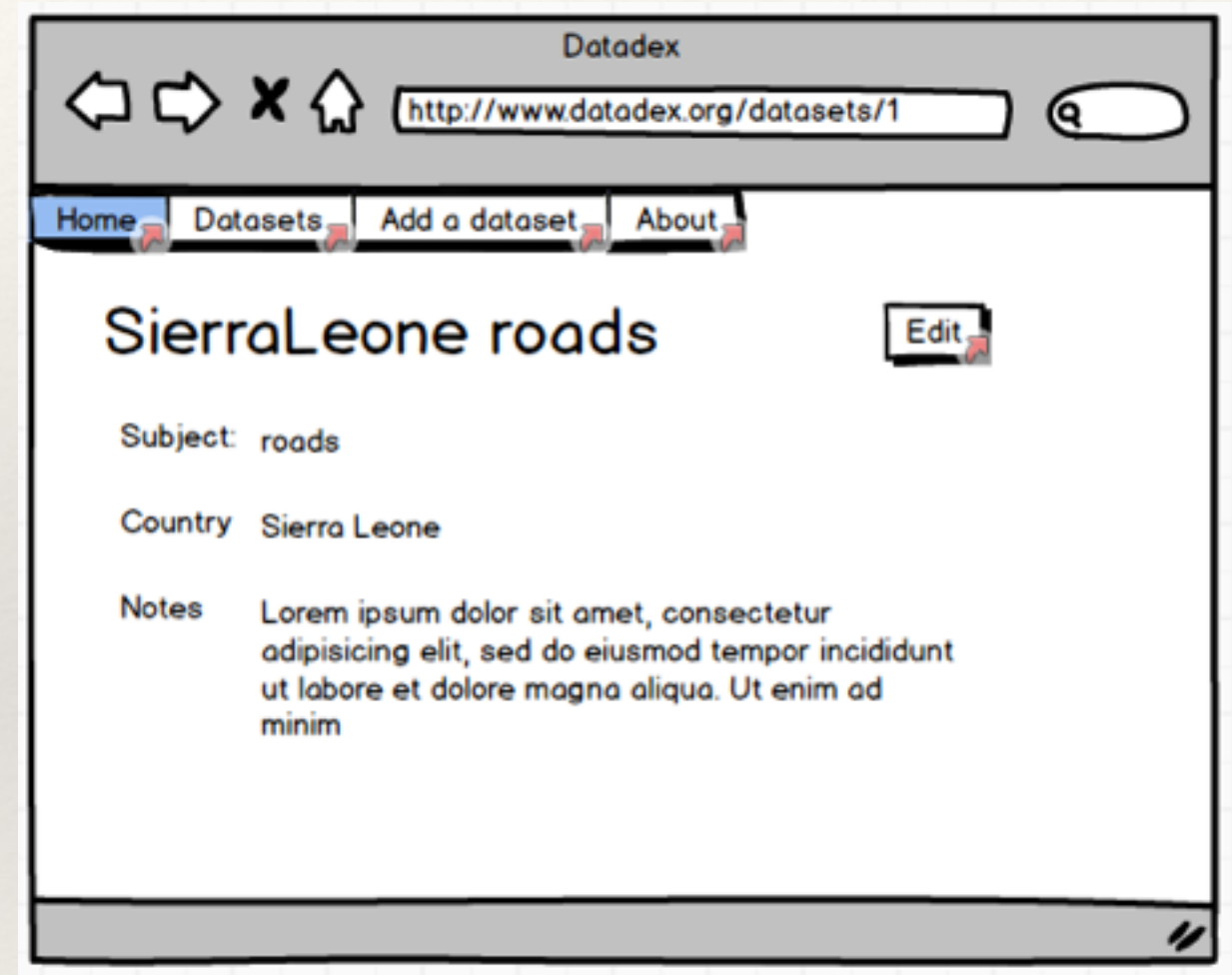
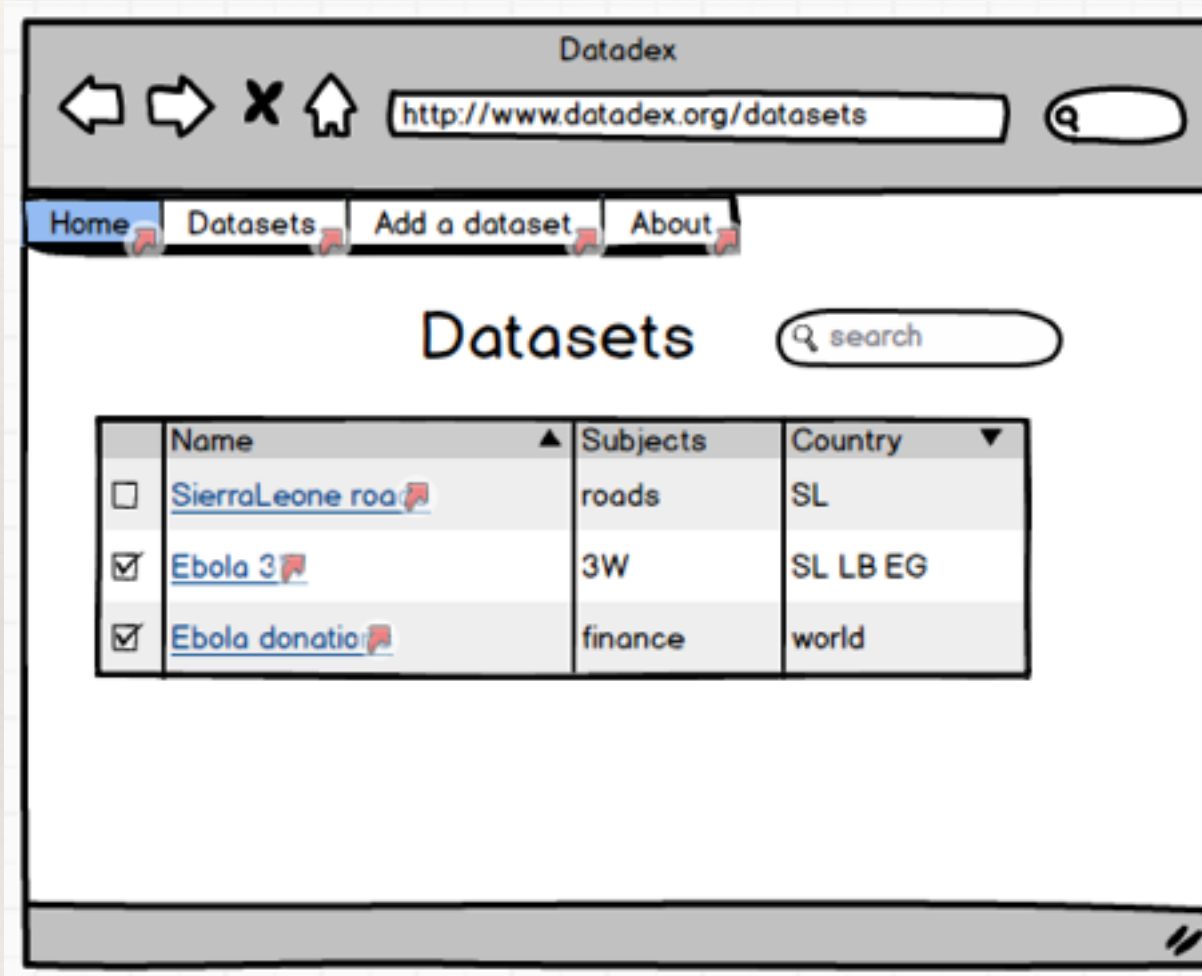
- ❖ Frontpage
- ❖ About
- ❖ List all datasets
- ❖ View a dataset

# 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:



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# Creating My Application

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

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# First Controller: Welcome

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- ❖ In the terminal window, type:

**rails generate controller welcome index**

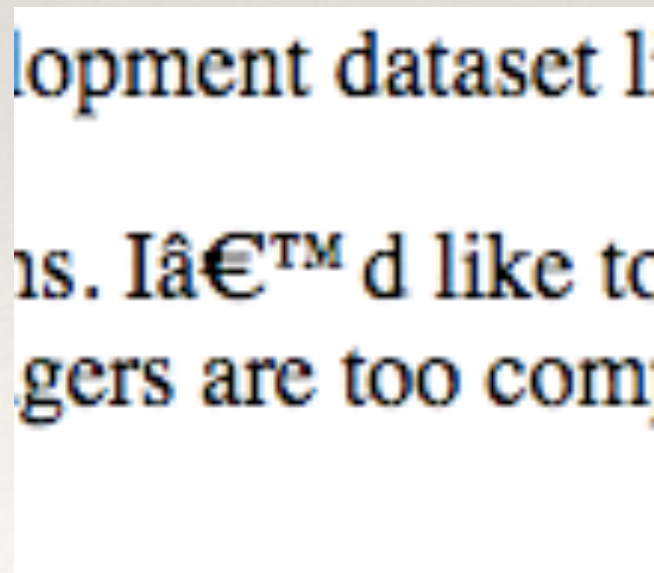
- ❖ This creates a controller, a view and a route:
  - ❖ route: “GET welcome/index”
  - ❖ controller: app/controllers/welcome\_controller.rb
  - ❖ view: app/views/welcome/index.html.erb
  - ❖ helper: app/helpers/welcome\_helper.rb
  - ❖ test: test/helpers/welcome\_helper\_test.rb
- ❖ Check the route 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>

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# NB: Character fails...

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- ❖ 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.





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# Routes

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- ❖ 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/`

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# My Models

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- ❖ 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



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# My Model Relations

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

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# My Views

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- ❖ 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