Homework Assignment 03
Designing the Front End

Assigned: Fri 23 SEP 2022
Due: Wed 05 OCT 2022

Description

This is the first of several assignments that will guide you through the creation of a Website that you will be working on throughout the semester. The skills you practice on the assignments are meant to be used on a project of your own. Do all your work in a directory called ***assignment*** off of the ***public*** directory. Commit your work frequently throughout the day and push your changes at the end of the day to deploy and restart your server. When you are ready to submit this assignment, ***tag*** your last commit you wish to be graded on as ***assignment3*** on GitHub. You can keep working and committing and pushing. The TAs and instructors can always view your assignment using the ***assignment3*** tag.

The Website you will be building throughout the assignments will allow users to create and use online, mobile friendly, Websites. We will be building a Website to create Websites. There are two types of users. We will refer to those users creating the Websites as developers. Users that visit the Websites created by the ***developers*** will be referred to as ***end users***. Only developers can create and modify the Websites. End users cannot modify the Websites, they can only interact with them. The Website will be built using the MERN stack using the four underpinning technologies MongoDB, Express/Flask, React, and Node.js.

In this assignment you will get started creating the Website by first focusing on creating a set of static pages that will serve as a prototype. The prototype will allow evaluating user interface aspects of the application such as navigation, information layout, page dependencies, modalities, and authentication. Although the pages will have links, forms and buttons to interact with, the Website won't actually do anything yet. It will only be an empty shell for now. We will add the functionality as we progress through the rest of the assignments. All pages and content must be responsive and mobile friendly.

Use Cases

The following use cases describe the functionality of the Web application in terms of a set of use cases:

Developer Use Cases

1. Developer registers
2. Developer logs in
3. Developer views their profile
4. Developer updates their profile
5. Developer logs out

Website Use Cases

1. Developer views a list of her websites
2. Developer creates a website
3. Developer updates a website
4. Developer deletes a website

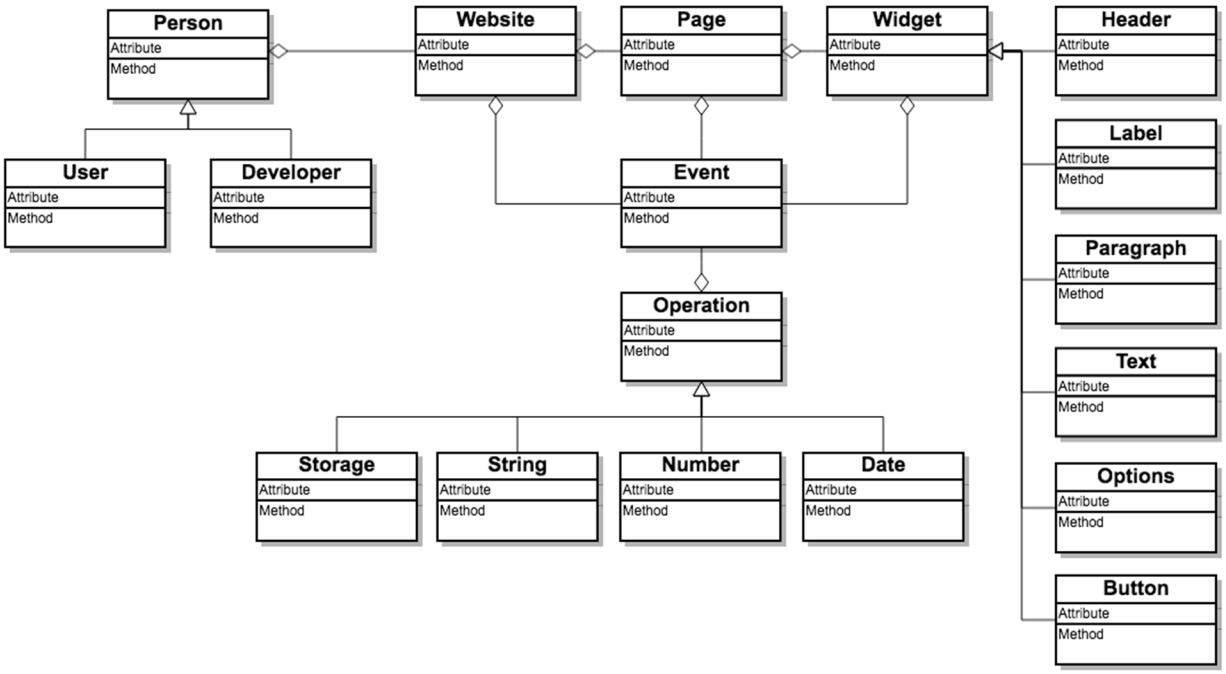
Page Use Cases

1. Developer views a list of pages in a website
2. Developer adds a page to the website
3. Developer updates a page
4. Developer deletes a page

Widget Use Cases

1. Developer views a list of widgets in a page
2. Developer adds a widget to a page
3. Developer reorders widgets in a page
4. Developer updates a widget
5. Developer deletes a widget

Data Model
A data model describes the various types of objects that are used in a Website such as pages, widgets, and users. A ***type of object*** is also referred to as a ***class*** and the diagram below is called a ***class diagram***. Data models also capture the relationships between the different types of objects or classes. For instance the class diagram below states that a person might be related to, or have, several Websites, that a Website in turn can have many pages, a page can have several widgets.



Wireframes
Given the wireframes discussed in class, implement the following HTML pages using HTML, CSS, and Bootstrap. The HTML pages should responsive and mobile first. Tablet and desktop layout will be considered in a later assignment. The wireframes just show the functionality and layout of the page, the do not show the look and feel of the page. You can use the default look and feel provided by bootstrap stylesheet, but you can improve on the style. Apply the styles using bootstrap classes. The instructor will demonstrate how to use bootstrap styles and code samples to build the Web pages. These are the Web pages you must create:

User Pages
index.html (home)
login.html
register.html
profile.html

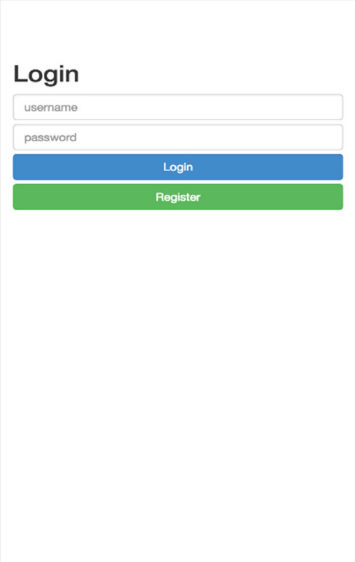
Website Pages
website-list.html
website-new.html
website-edit.html

Page Pages
page-list.html
page-new.html
page-edit.html

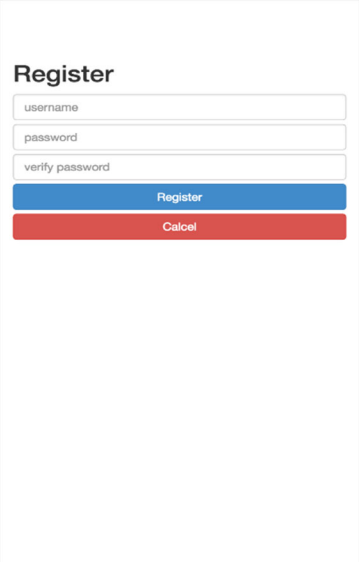
Widget Pages
widget-list.html
widget-choose.html
widget-heading.html
widget-image.html
widget-youtube.html

User Pages

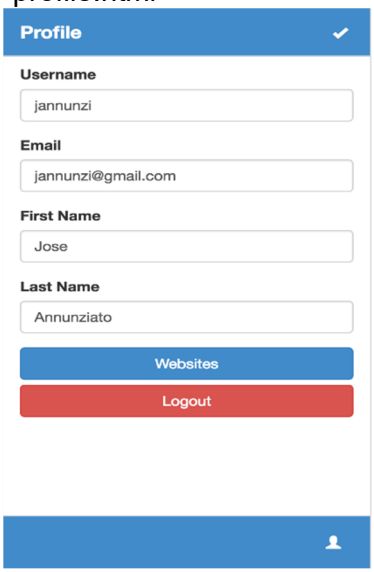
login.html



register.html

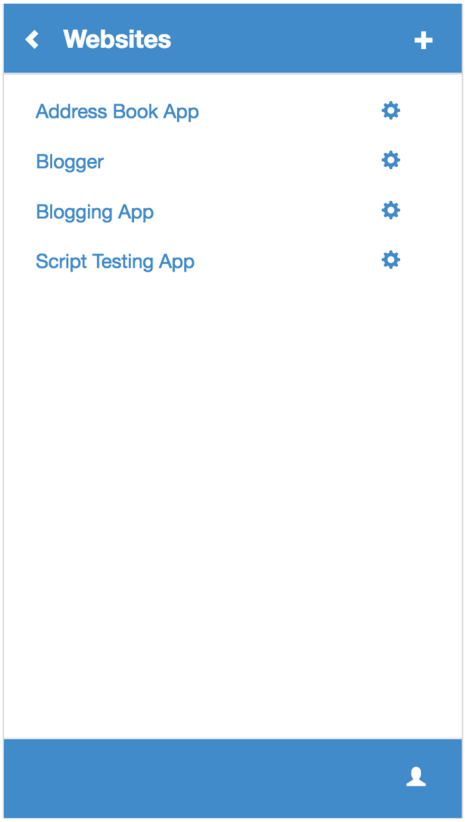


profile.html

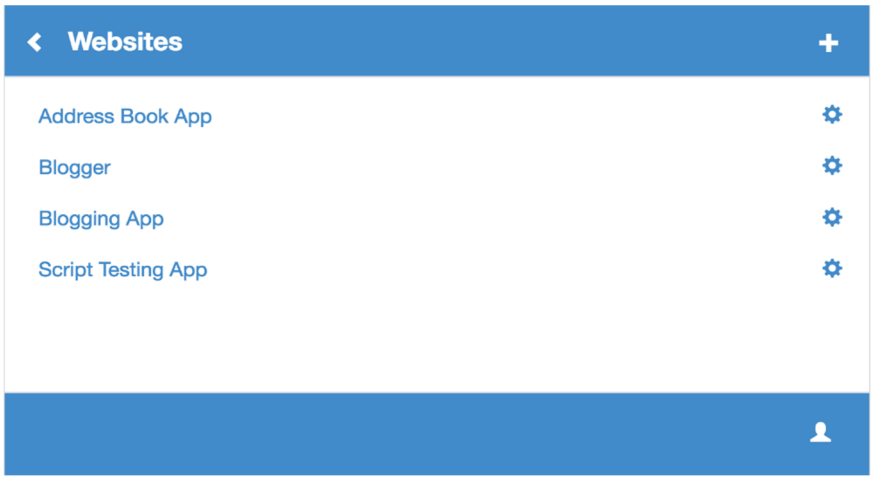


Website Pages

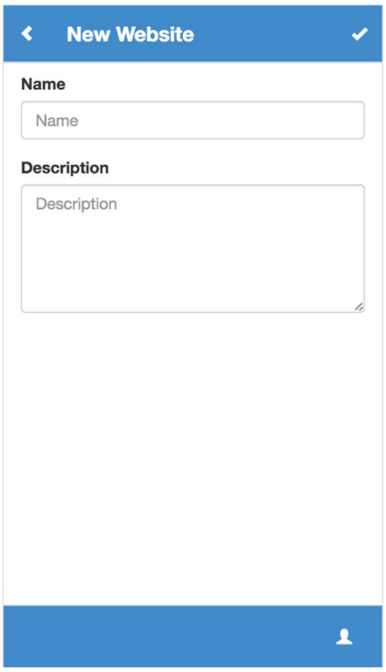
website-list.html Portrait



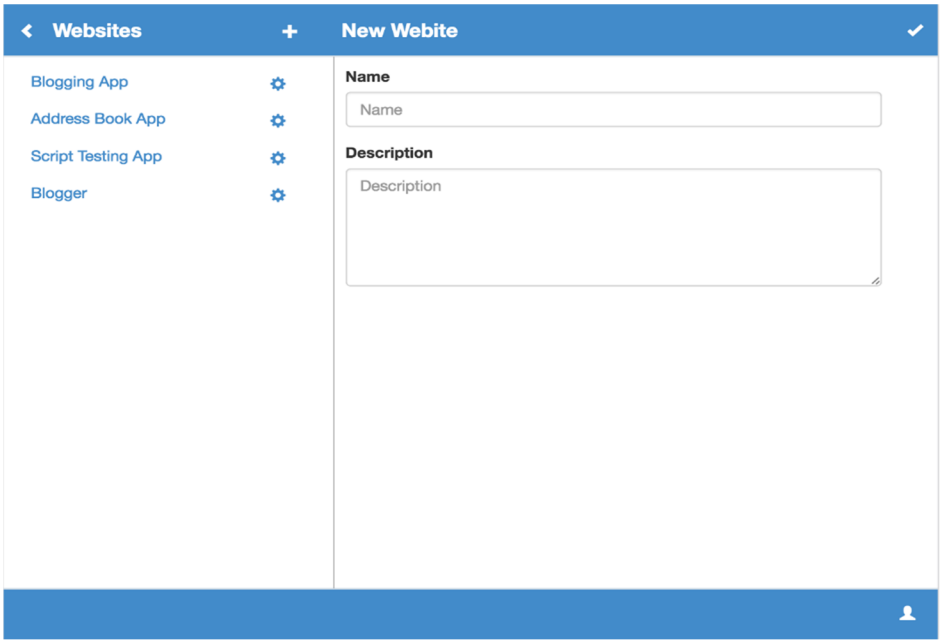
website-list.html Landscape



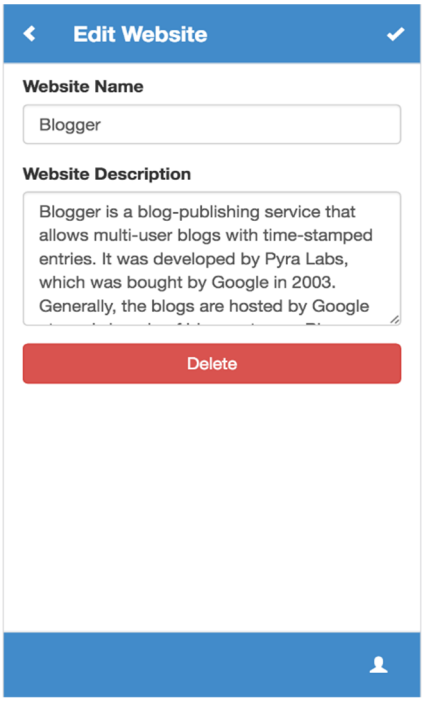
website-new.html Portrait



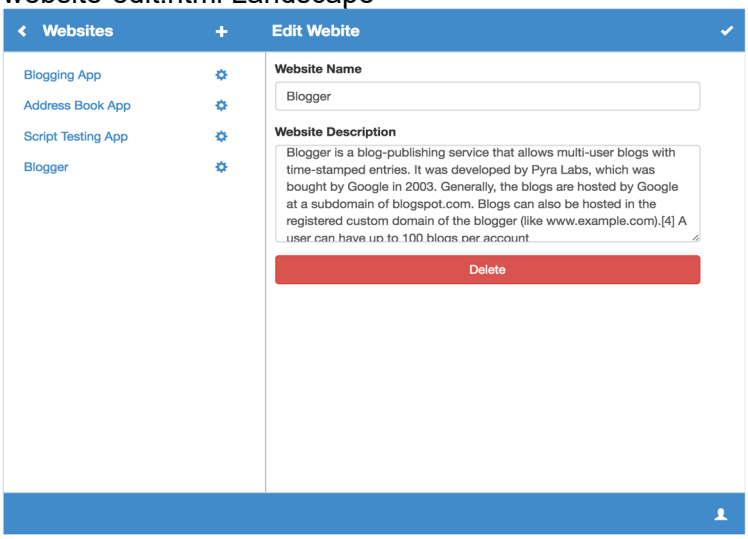
website-new.html Landscape



website-edit.html Portrait

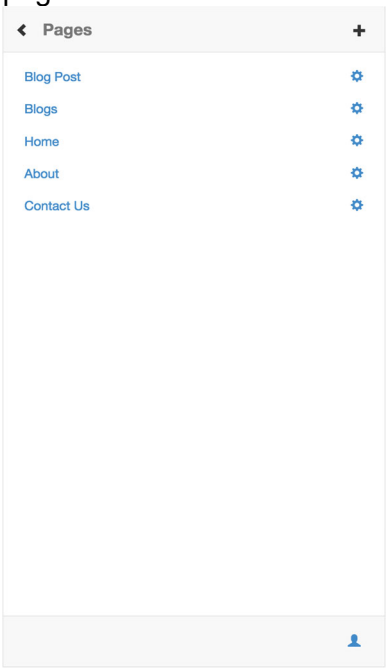


website-edit.html Landscape

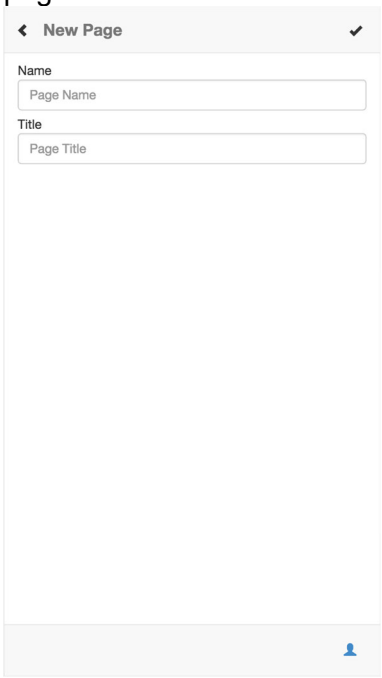


Page Pages

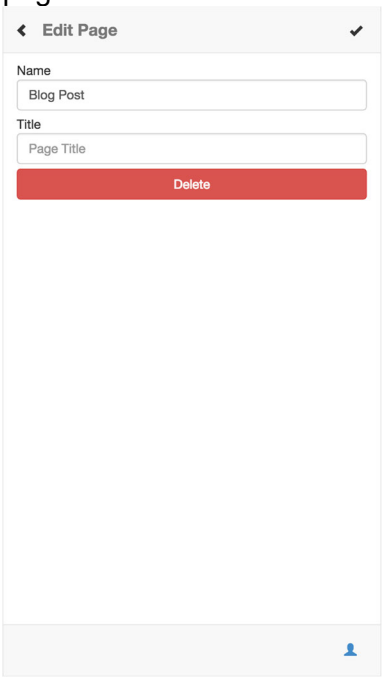
page-list.html Portrait



page-new.html Portrait

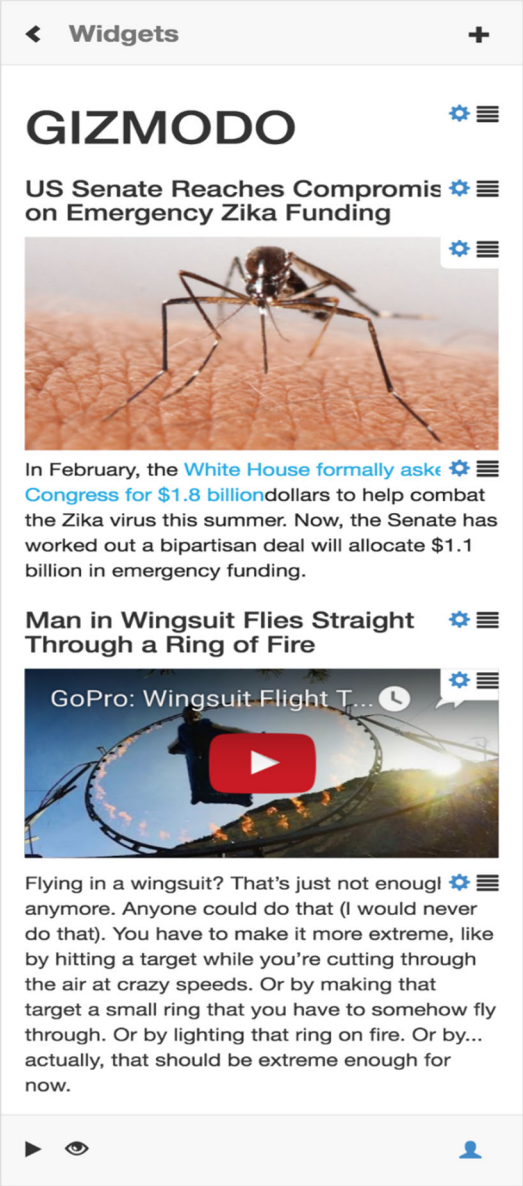


page-edit.html Portrait



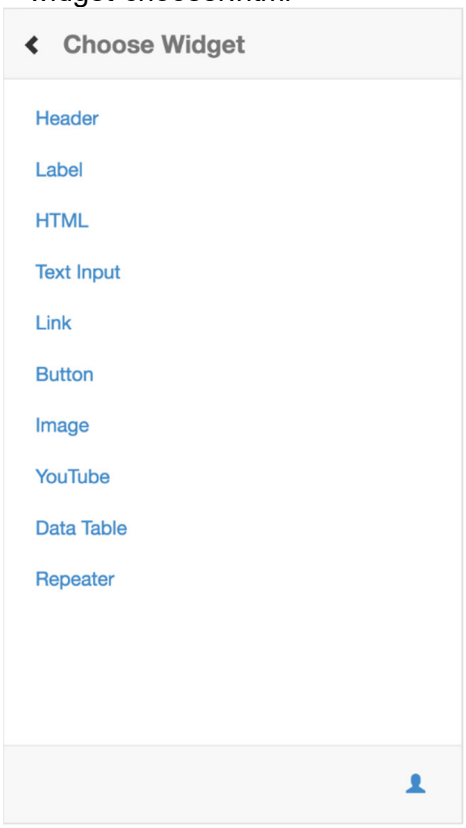
Widget Pages

widget-list.html

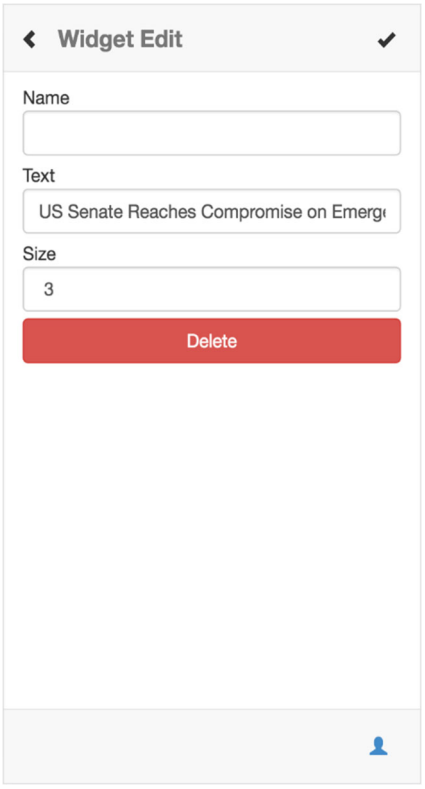


Note: The image, paragraphs, and YouTube video shown above are only for illustration purposes. You can use your image, paragraphs, and YouTube video

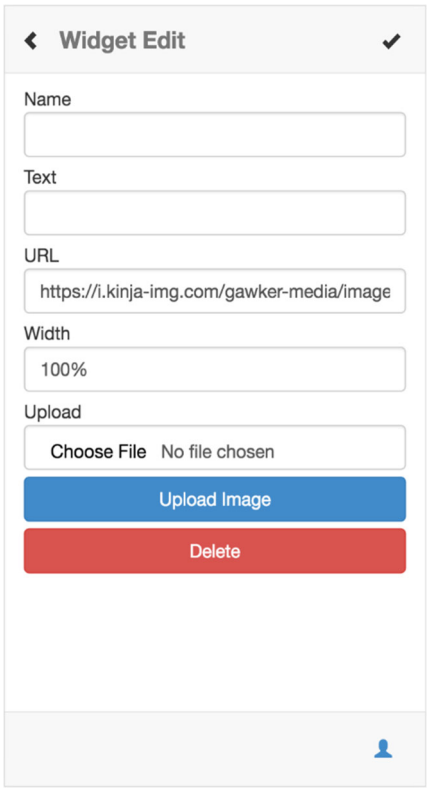
widget-chooser.html



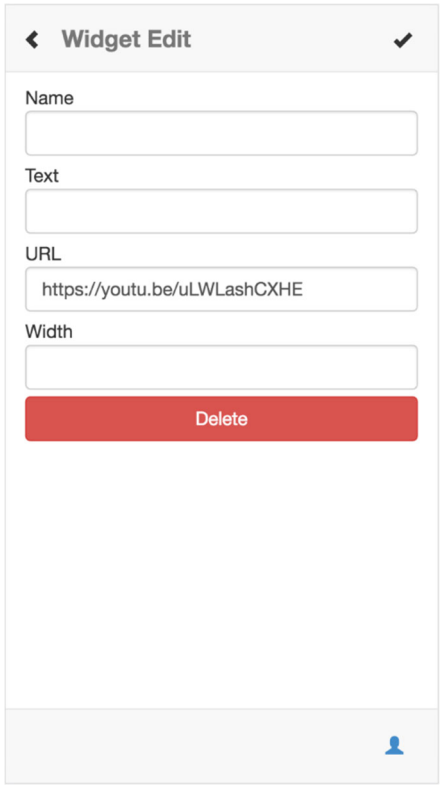
widget-heading.html



widget-image.html



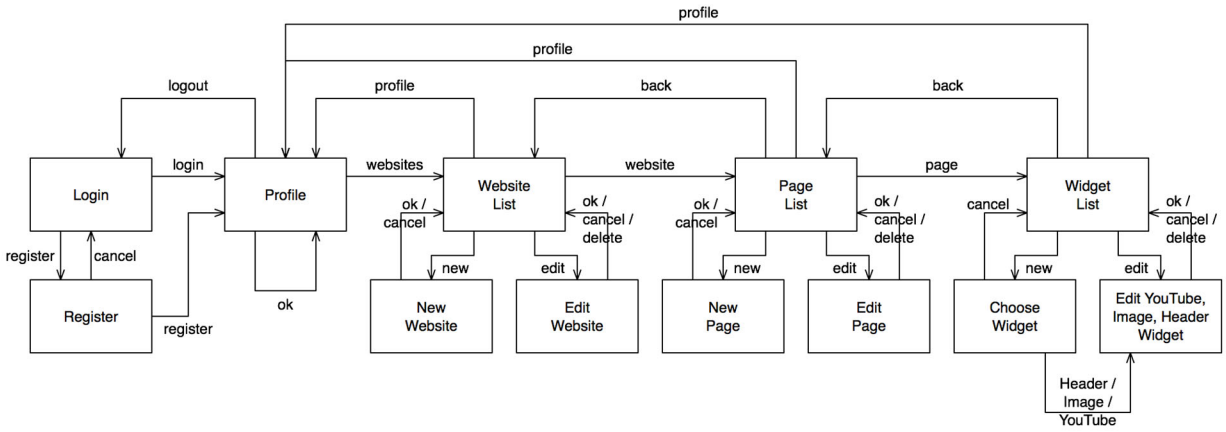
widget-youtube.html



Website Navigation

Implement navigation as shown in the page flow diagram and table below. Ignore links and buttons not listed here. Other links and buttons will be addressed in subsequent assignments.

Page Flow Diagram



Page Flow Table

From Page	Action/Button/Link	To Page
Login Page - login.html	Login	Profile Page - profile.html
	Register	Register Page - register.html
Register Page - register.html	Register	Profile Page - profile.html
	Cancel	Login Page - login.html
Profile Page - profile.html	Logout	Login Page - login.html
	Websites	Website List Page - website-list.html
	Ok (Check)	Profile Page - profile.html
Website List Page - website-list.html	New Website (Plus)	New Website Page - website-new.html
	Edit Website (Cog)	Edit Website Page - website-edit.html
	Website Name	Page List Page - page-list.html
	Profile (Person)/ Back (Left Arrow)	Profile Page - profile.html
New Website Page - website-new.html	Ok (Check)	Website List Page - website-list.html
	Cancel (Left Arrow)	
	Profile (Person)	Profile Page - profile.html
Edit Website Page - website-edit.html	Ok (Check)	Website List Page - website-list.html
	Delete	
	Cancel (Left Arrow)	
	Profile (Person)	Profile Page - profile.html
Page List Page - page-list.html	Add Page (Plus)	New Page Page - page-new.html
	Edit Page (Cog)	Edit Page Page - page-edit.html
	Page Name	Widget List Page - widget-list.html
	Back (Left Arrow)	Website List Page - website-list.html
	Profile (Person)	Profile Page - profile.html
New Page Page - page-new.html	Ok (Check)	Page List Page - page-list.html
	Cancel (Left Arrow)	
	Profile (Person)	Profile Page - profile.html
Edit Page Page - page-edit.html	Ok (Check)	Page List Page - page-list.html
	Delete	
	Cancel (Left Arrow)	
	Profile (Person)	Profile Page - profile.html
Widget List - widget-list.html	Add Widget (Plus)	Choose Widget - widget-choose.html
	Back (Left Arrow)	Page List - page list
	Edit Header (Cog)	Edit Header Widget - widget-heading.html
	Edit Image (Cog)	Edit Image Widget - widget-image.html
	Edit YouTube (Cog)	Edit YouTube - widget-youtube.html
	Profile (Person)	Profile page - profile.html
Choose Widget - widget-choose.html	Header	Edit Header Widget - widget-heading.html
	Image	Edit Image Widget - widget-

		image.html
	YouTube	Edit YouTube Widget - widget-youtube.html
	Back (Left Arrow)	Widget List - widget-list.html
Edit Header Widget - widget-heading.html	Ok (Check)	Widget List - widget-list.html
	Cancel (Left Arrow)	
	Delete	
Edit Image Widget - widget-image.html	Ok (Check)	Widget List - widget-list.html
	Cancel (Left Arrow)	
	Delete	
Edit YouTube Widget - widget-youtube.html	Ok (Check)	Widget List - widget-list.html
	Cancel (Left Arrow)	
	Delete	

Styling

Implement styling as shown in the wireframes. Apply the styles where appropriate. Not all styles are applicable for this particular assignment. In particular, make sure to:

1. Use Bootstrap to style the website. Alternatively, you may use React Material, or Foundation
2. All **`text`** input fields must be of type **`text`**
3. All **`password`** input fields must be of type **`password`** to hide passwords from prying eyes
4. All **`email`** input fields must be of type **`email`** to support simple validation
5. All **`date`** input fields must be of type **`date`** to provide a simple date picker
6. All **`textarea`** input fields must be **at least 3 rows high** as shown in the wireframes. Textareas should not have default white space
7. All **`file`** input fields must be of type **`file`** to allow browsing files
8. Configure **input field default text** or values as shown in the wireframes
9. All input fields must use Bootstrap's **`form-control`** class or equivalent
10. All input fields must have a **`placeholder`** that describes the type of input. Use the placeholders shown in the wireframes
11. **Buttons and links** that look like buttons, must use bootstrap classes **`btn`** and **`btn-block`** classes to render them as buttons where appropriate. Use other button related bootstrap classes to color the buttons as shown in the wireframe, e.g., **`btn-primary`**, **`btn-danger`**, **`btn-success`**
12. **Tables must be styled** with bootstrap classes **`table`** and **`table-responsive`** to ensure they are responsive. Use other table classes as appropriate
13. All links should be styled with a shade of blue, but no underline when hovering
14. Use bootstrap **glyphicons** to illustrate actions such as ok, cancel, back, done, add, remove, config, as shown in the wireframe. Alternatively, Font Awesome fonts may be used as well
15. Make proper use of **white space**, e.g., use padding, margins, wrapping and text justification to style the content as shown in the wireframes
16. Pages should not allow **pinching-to-zoom** on mobile devices, unless otherwise stated
17. Pages should not have **horizontal scrollbars** unless otherwise stated
18. Headers and footers should be **statically positioned** at the top and bottom respectively. They should not scroll with the rest of the content

19. All **CSS and JavaScript libraries** must use CDN and declared in the **`meta`** element. Alternatively, libraries can be declared at the bottom of the **`body`** element for performance considerations
20. Pages must **not use style element or attributes**. All additional custom styling must be done in a separate stylesheet file, e.g., **`public/assignment/css/styles.css`**
21. Custom style sheets overriding CSS library styles, must be declared after the library styles they override
22. Pages must **not use inline JavaScript**. All additional custom scripting should be done in a separate JavaScript file, e.g., **`public/assignment/js/app.js`**

Deliverables

GitHub Deliverables
To allow TAs and instructor to see your changes, please frequently commit and push your work to GitHub repository. Below is an example of the commands you will use. The example assumes your project is located in **`~/neu/webdev`**:

```
> cd ~/neu/webdev
> git add .
> git commit -m 'A comment describing your work'
> git push
```

Verify that the files have copied to the github repository. Also visit your online website and verify that your changes are reflected on the remote server.

Tagging a Release
We will be using code repository tags (or releases) to "submit" assignments. When you consider your work complete and ready for evaluation (ready for release), go to your code repository in GitHub and generate a release by navigating to "releases". Then click on "Create a new release" and type the name of the tag in the input field labeled "Tag version". We will be using the following tags for the various assignments:

assignment1 (previous assignment)
assignment2 (previous assignment)
assignment3 (this assignment)
assignment4 (next assignment)
assignment5
assignment6 (last assignment)
project

If you need to resubmit the assignment then create a new tag by adding a version number, e.g.,

Assignment3.1, assignment3.2, etc...

We will grade the very last release. The date/time you create the tag will be considered the date/time of submission. If you have questions on how to create tags or have any problem at all, please do not hesitate to contact the instructor.