Mobile Application Development

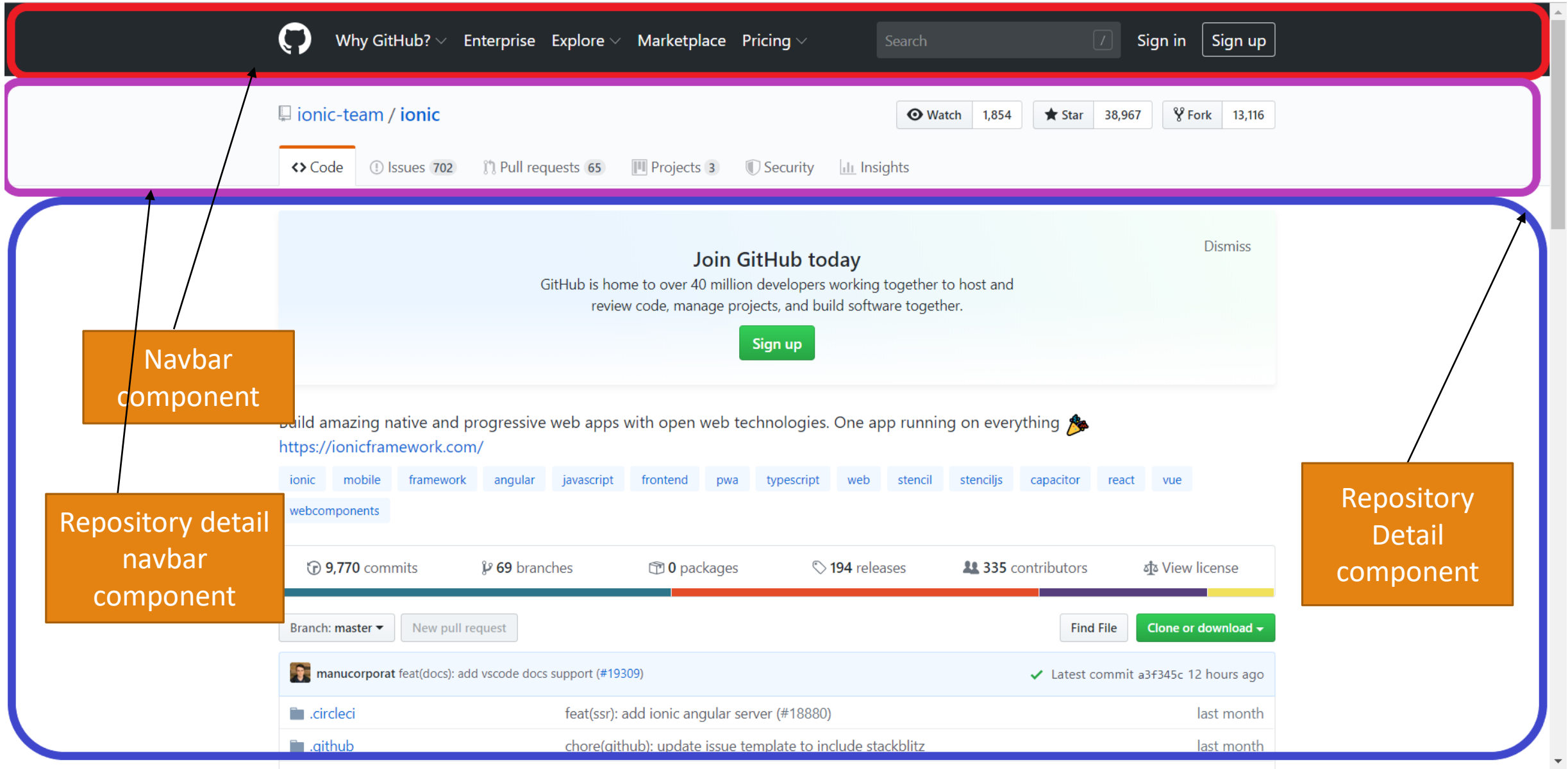
LECTURE 3

Introduction to Components

- **Components** are like building blocks of a program. Think of components as blocks. You join many blocks together to build a house. Sometimes you use same blocks/components in different areas of the house.

-   tag in HTML provides a logical block. Components can be like that.

- Components are just a controller for a user interface.


Why GitHub?
Enterprise
Explore
Marketplace
Pricing
Search
Sign in
Sign up
ionic-team / ionic
Watch 1,854
Star 38,967
Fork 13,116
Code
Issues 702
Pull requests 65
Projects 3
Security
Insights
Join GitHub today
GitHub is home to over 40 million developers working together to host and review code, manage projects, and build software together.
Sign up
Dismiss
https://ionicframework.com/
ionic
mobile
framework
angular
javascript
frontend
pwa
typescript
web
stencil
stenciljs
capacitor
react
vue
webcomponents
9,770 commits
69 branches
0 packages
194 releases
335 contributors
View license
Branch: master
New pull request
Find File
Clone or download
manucorporat feat(docs): add vscode docs support (#19309)
Latest commit a3f345c 12 hours ago
.circleci
feat(ssr): add ionic angular server (#18880)
last month
.github
chore(github): update issue template to include stackblitz
last month
Navbar component
Repository detail navbar component
Repository Detail component

Unlock'd Buy Sell Learn SIGN IN | SIGN UP LIST A PROPERTY

Navbar

Featured **Properties**

List Items

$500,000 sale

Condominium in Texas

Carson St, Haltom City, TX 76117, USA

35000 SF 1 1 2

$2,000,000 sale

Single Family Attached (Townhome) i...

53215 Timberview Rd, North Fork, CA 9...

20000 SF 1 0 1

$3,000,000 sale

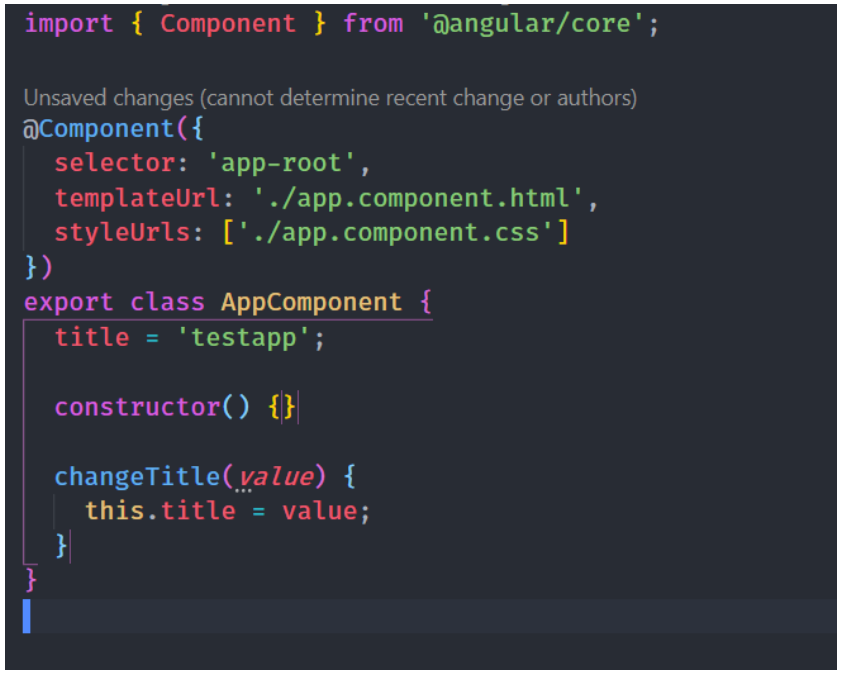
Single Family-Detached in Louisiana

4818 Tulane Dr, Baton Rouge, LA 70808,...

30000 SF 5 3 0

Example of a Component

- A Component in Angular has its own css file (optional), html file and a .ts (typescript file).



```
import { Component } from '@angular/core';

Unsaved changes (cannot determine recent change or authors)
@Component({
  selector: 'app-root',
  templateUrl: './app.component.html',
  styleUrls: ['./app.component.css']
})
export class AppComponent {
  title = 'testapp';

  constructor() {}

  changeTitle(value) {
    this.title = value;
  }
}
```

@Component is a TypeScript Decorator. It provides

meta data. E.g Selector, html file, css file.

if it was a Directive or Pipe, it would be **@Pipe**, **@Directive**

“Don’t wish it were easier; wish you were better.” ~ Jim Rohn

Angular Modules

- **Modules** is a mechanism to group components, directives, pipes and services that are related, in such a way that can be combined.
- A Module is a collection of different components (usually with a similar functionality)
- By Default, we have 1 App module. We can create modules ourselves depending on our needs.

Directives

- **Directive** is a component without its html or css.
- Directives are very powerful as they help you change functionality of the DOM/View depending on your requirements.
- Angular provides few built-in directives (*ngFor, *ngIf). However, we can also create directives ourself.

Type of Directives

There are three main types of directives in Angular:

Component - directive with a template. (yes components are a directive)

Attribute directives - directives that change the behavior of a component or element but don't affect the template. E.g ngClass, ngStyle

Structural directives - directives that change the behavior of a component or element by affecting how the template is rendered . E.g *ngIf, *ngFor

Pipes

- Pipes provides a new way of filtering data.
- There are many built-in pipes like currency, date etc. However, just like Directives, we can create them according to our requirements.
- Pipes only filter data but don’t actually change the value.

```ts
export class AppComponent {
  title = 'testapp';

  amount = 100.42331234;
  todayDate = Date.now();

  constructor() {}

  changeTitle(value) {
    this.title = value;
  }
}
```

```html
<h3>amount {{amount | number}}</h3>
<h3>date without pipe {{todayDate }}</h3>
<h3>date with pipe {{todayDate | date}}</h3>
```

Result in Browser

amount 100.423

date without pipe 1568129303333

date with pipe Sep 10, 2019

Template Syntax in Angular

A template helps us to render HTML with some dynamic parts depending on our data.

{{ }} for interpolation.

[] for property binding.

() for event binding.

for variable declaration.

***** for structural directives.

Interpolation allows you to incorporate calculated strings into the text between HTML element tags and within attribute assignments. E.g {{ amount }} or {{ 2+4 }}. It can also include a JS expression