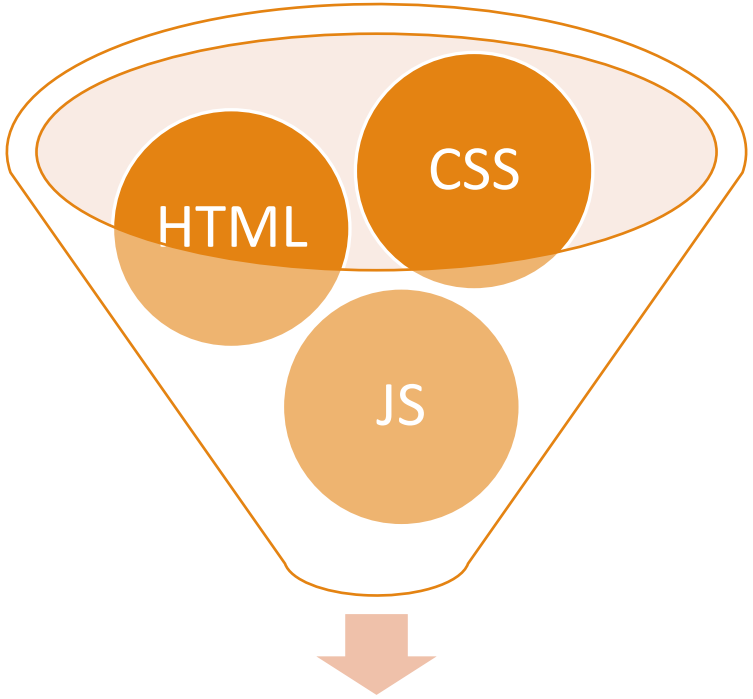
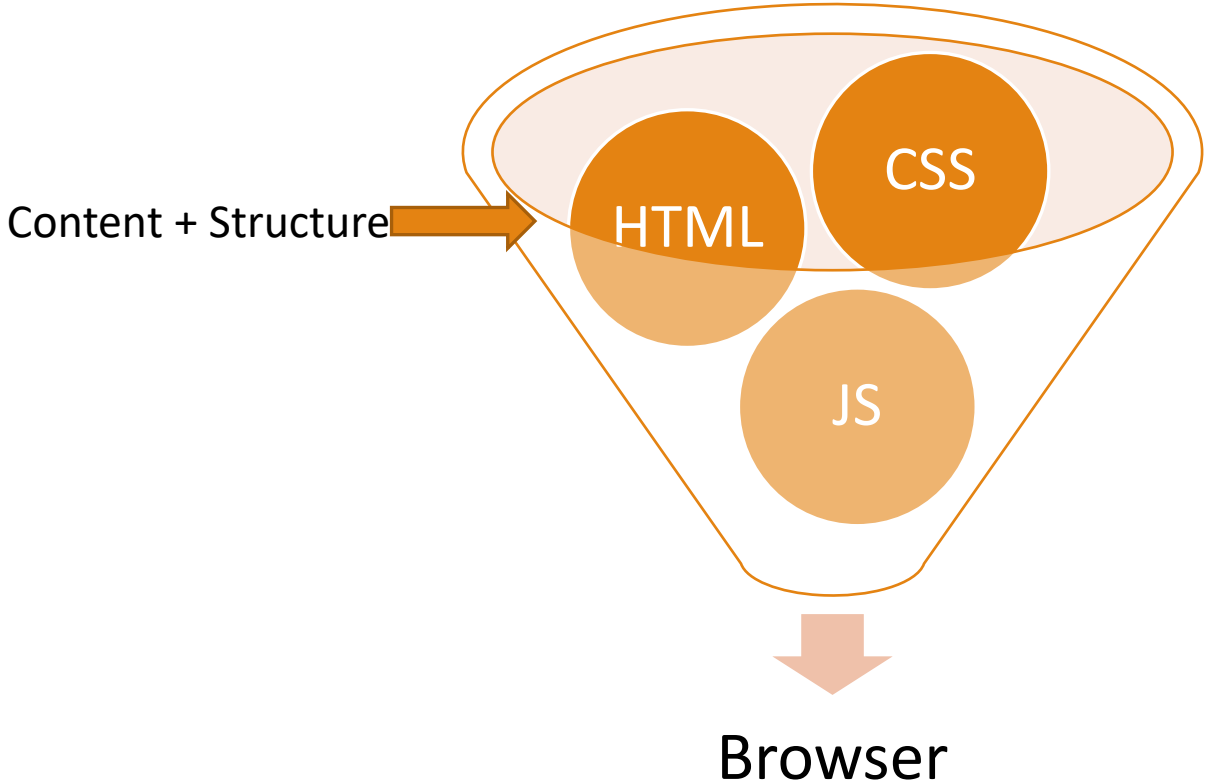
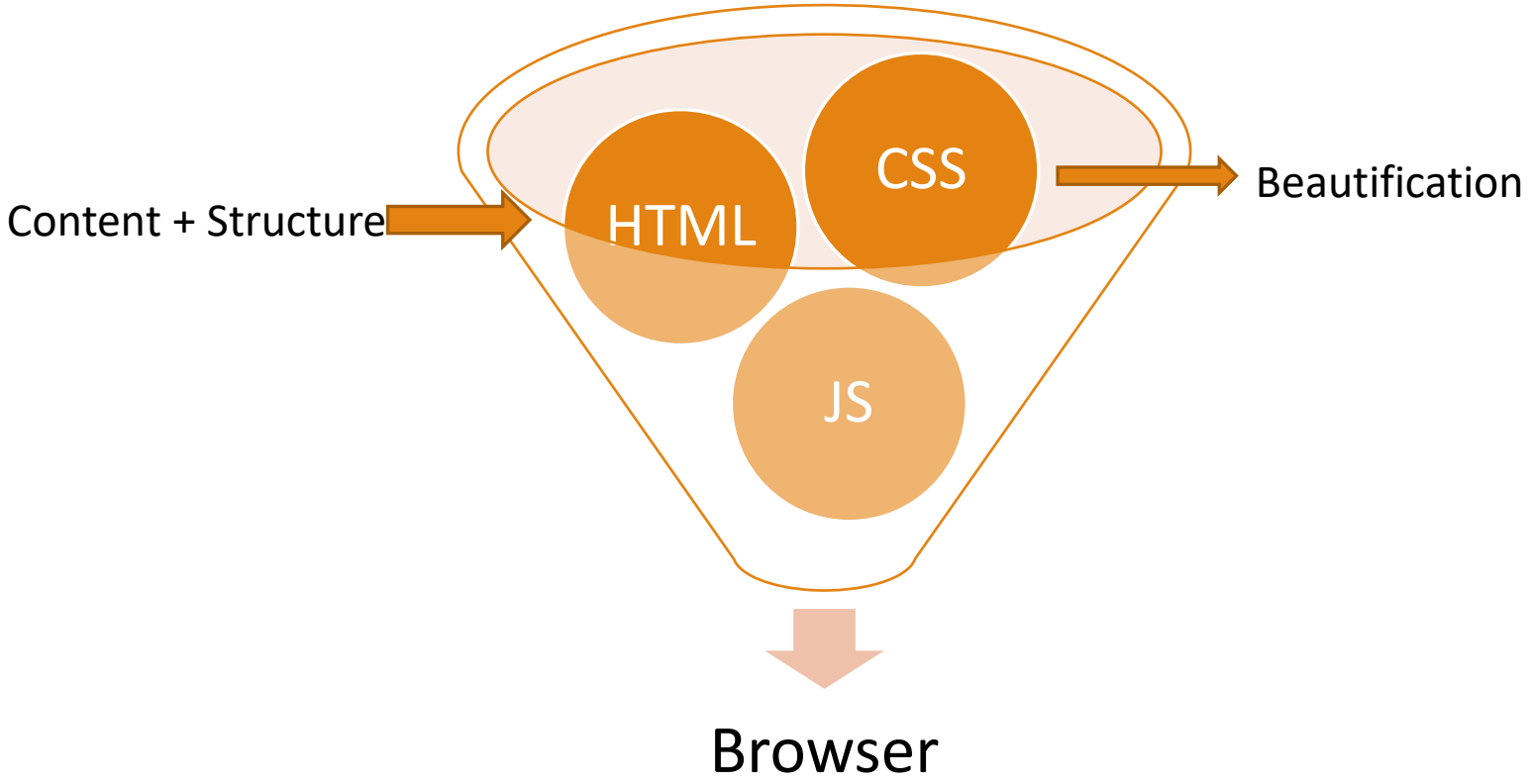
MERN Stack Course Over View

NEWBIE TO PRO


HTML
CSS
JS
Browser


Content + Structure
HTML
CSS
JS
Browser


Content + Structure
HTML
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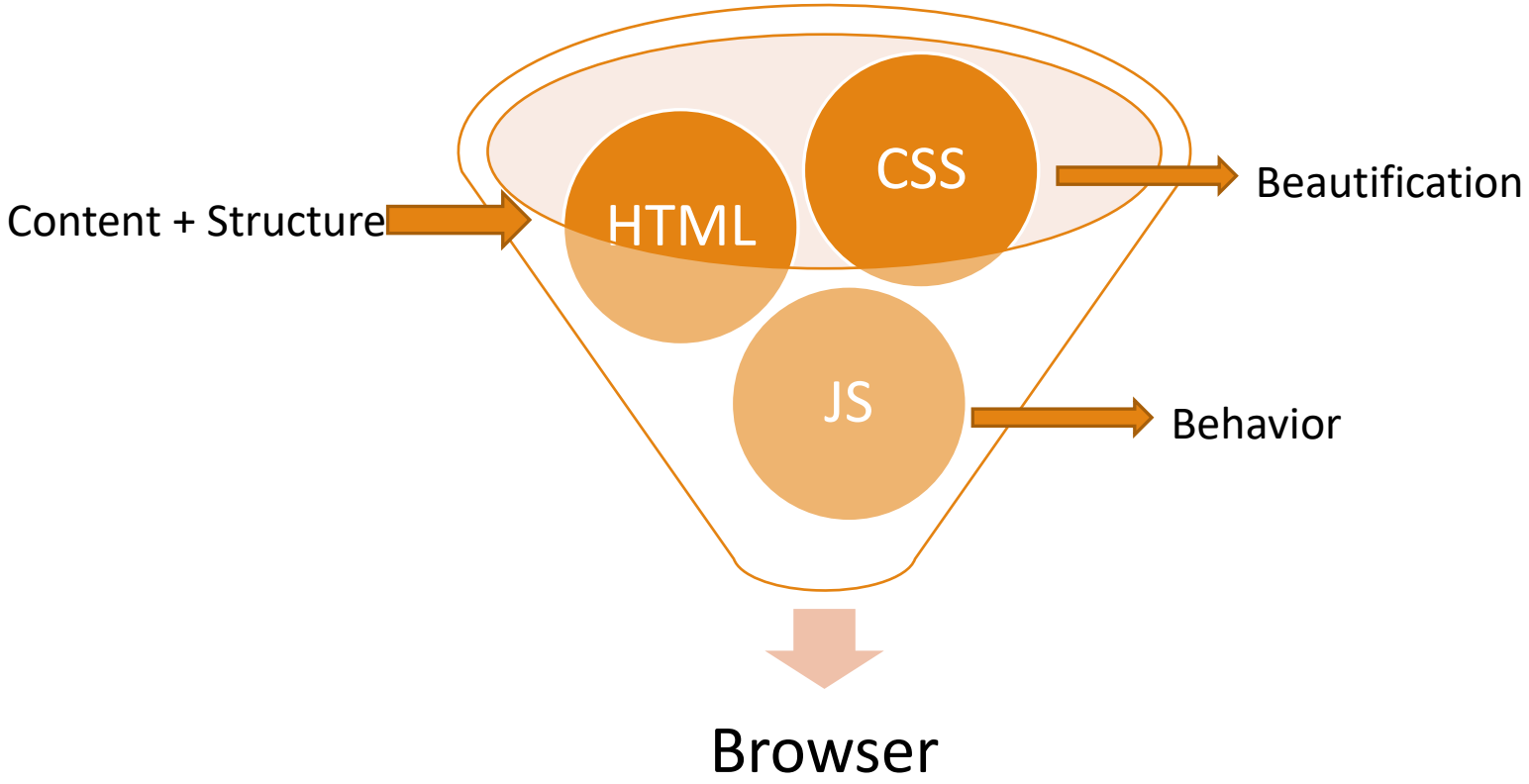
Beautification
Browser


Content + Structure
HTML
CSS
Beautification
JS
Behavior
Browser

Server

Content + Structure

HTML

CSS

Beautification

JS

Behavior

Browser

Server

Content + Structure

HTML

CSS

Beautification

JS

Behavior

Browser

Server Side Techs

- PHP
- ASP.NET
- Python
- JS (Node)
- etc

Server

Content + Structure

HTML

CSS

JS

Beautification

Behavior

Browser

Server Side Techs

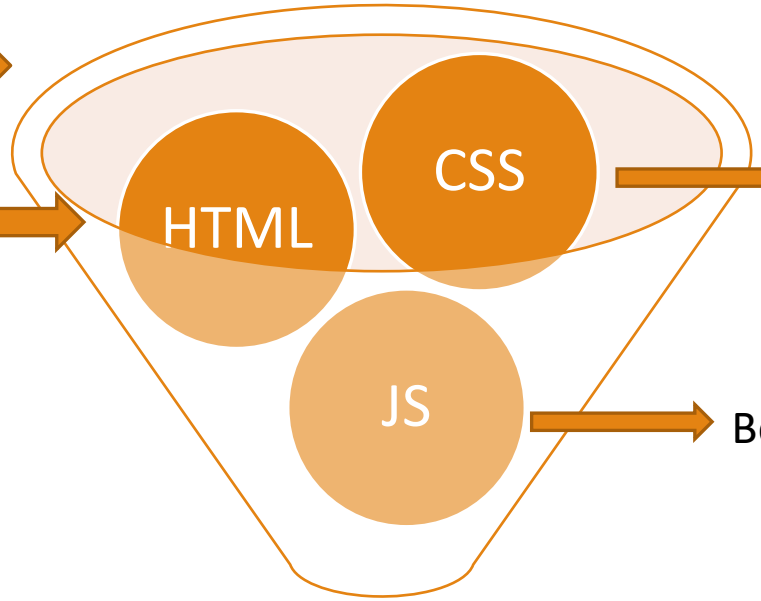
- PHP
- ASP.NET
- Python
- JS (Node)
- Etc

Client Side Techs

- HTML (Rendering Engines)
  - Blade
  - Pug etc

Server

Content + Structure



Beautification

Behavior

Browser

Server Side Techs

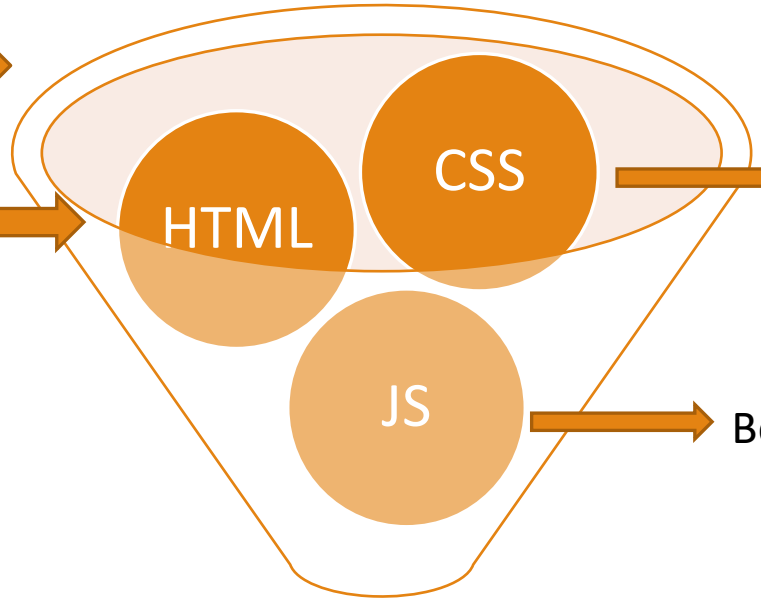
- PHP
- ASP.NET
- Python
- JS (Node)
- Etc

Client Side Techs

- HTML (Rendering Engines)
  - Blade
  - Pug etc
- CSS Enhancements
  - Bootstrap
  - Bulma
  - Foundation etc

Server

Content + Structure



Beautification

Behavior

Browser

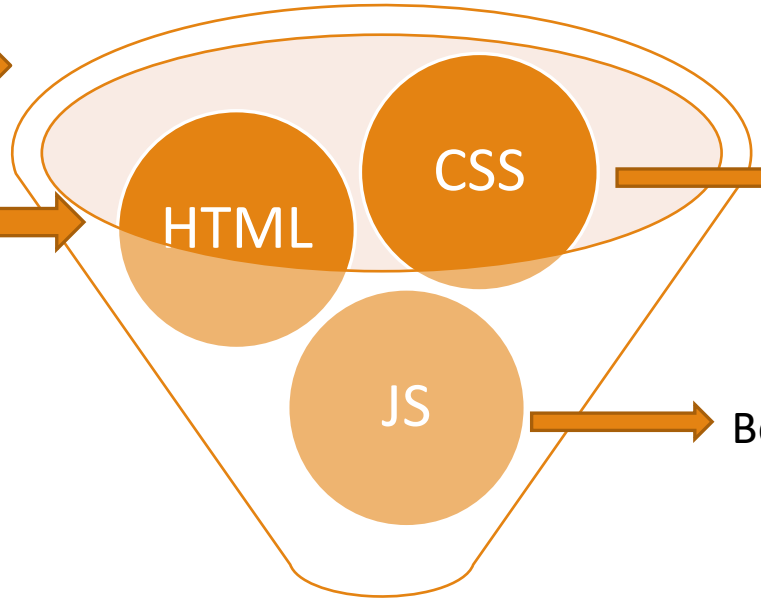
Server Side Techs
• PHP • ASP.NET • Python • JS (Node) • Etc

Client Side Techs

• HTML (Rendering Engines)
  • Blade
  • Pug etc
• CSS Enhancements
  • Bootstrap
  • Bulma
  • Foundation etc
• JS
  • Jquery
  • Angular
  • React etc

Server

Content + Structure



Beautification

Behavior

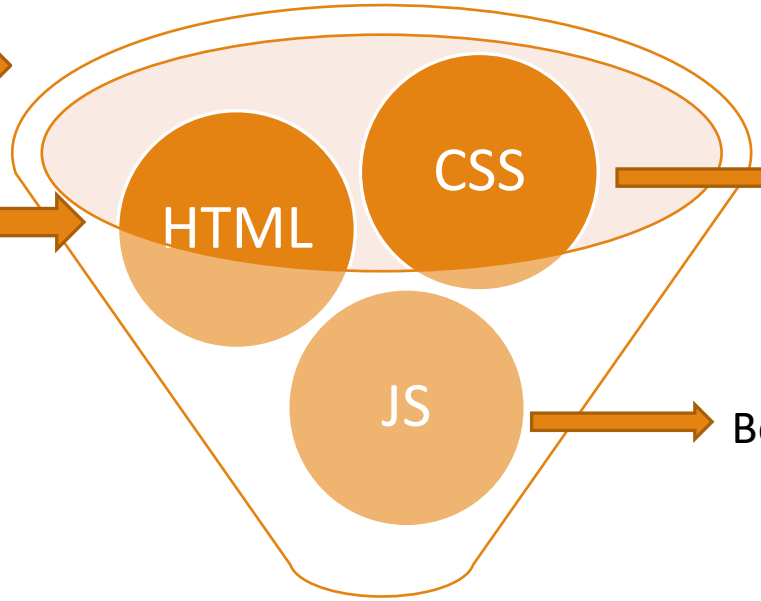
Browser

Server Side Techs	Database Servers	Client Side Techs

• PHP
• ASP.NET
• Python
• JS (Node)
• Etc
	• MSSql Server
	• PostGre
	• MongoDB
	• MySQL
	• etc
		• HTML (Rendering Engines)
		  • Blade
		  • Pug etc
		• CSS Enhancements
		  • Bootstrap
		  • Bulma
		  • Foundation etc
		• JS
		  • Jquery
		  • Angular
		  • React etc

Server

Content + Structure



Beautification

Behavior

Browser

Server Side Techs	Database Servers	Client Side Techs

• PHP
  • Laravel
• ASP.NET
  • MVC Framework
• Python
  • django
• JS (Node)
  • Express
• Etc
	• MSSql Server
	• PostGre
	• MongoDB
	• MySQL
	• etc
		• HTML (Rendering Engines)
		  • Blade
		  • Pug etc
		• CSS Enhancements
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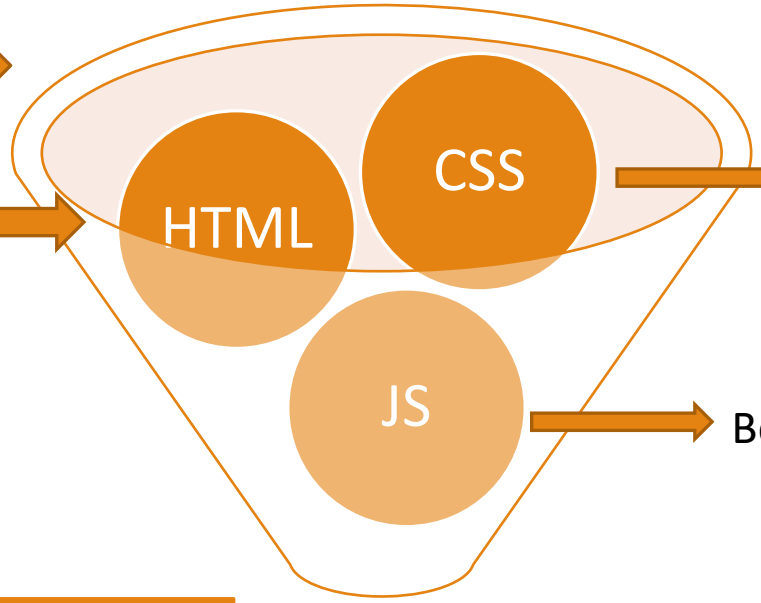
		• JS
		  • Jquery
		  • Angular
		  • React etc

Server

Content + Structure



Beautification

Behavior

Browser

Server Side Techs

- PHP
  - Laravel
- ASP.NET
  - MVC Framework
- Python
  - django
- **JS (Node)**
  - **Express**
- Etc

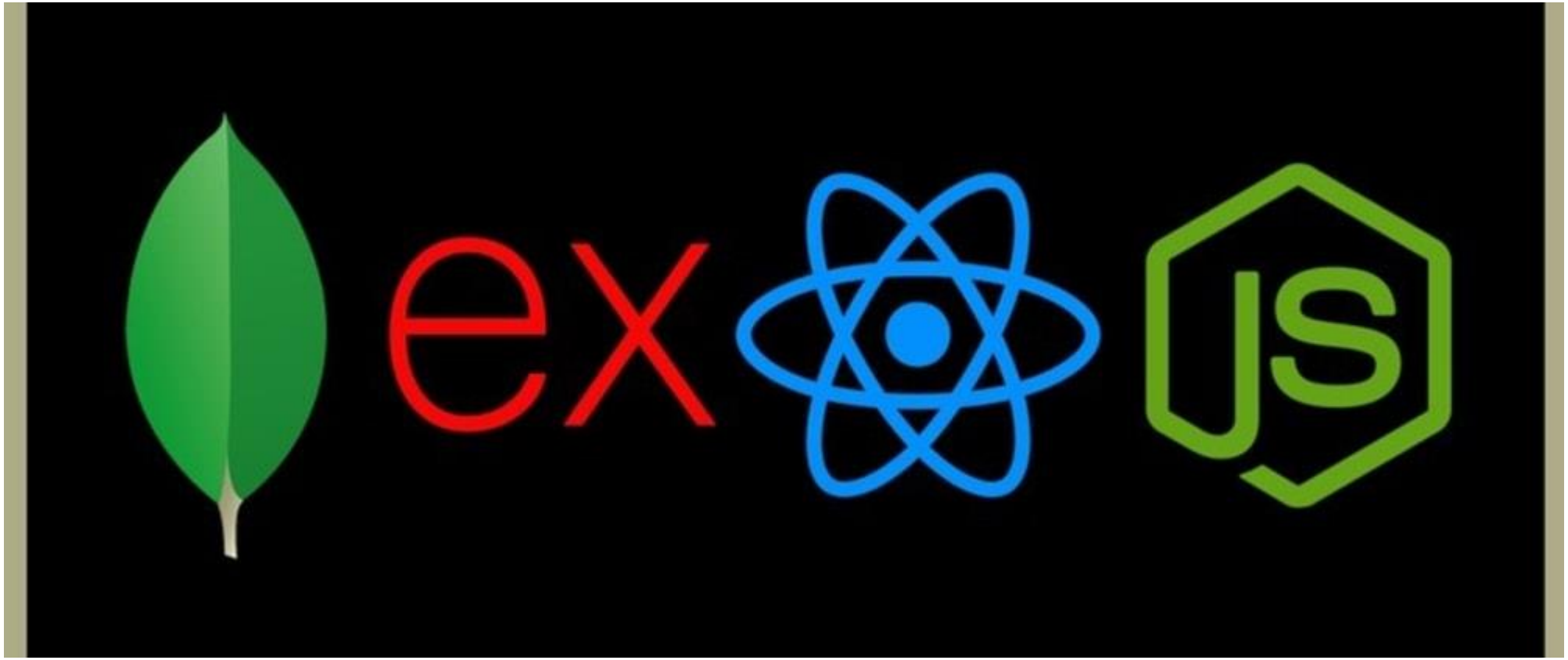
Database Servers

- MSSql Server
- PostGre
- **MongoDB**
- MySQL
- etc

Client Side Techs

- HTML (Rendering Engines)
  - Blade
  - **Pug** etc
- CSS Enhancements
  - **Bootstrap**
  - Bulma
  - Foundation etc
- JS
  - **Jquery**
  - Angular
  - **React** etc

(MERN) Mongodb Express React Node



Course Content Section One HTML+CSS

- Basics of HTML
- Basics of CSS
- Layout Designing
- Responsive Pages
- CSS Animations
- Bootstrap

Course Content Section TWO JS

- JS Course Intro
- Environment Setup
- HTML Deployment to Heroku
- Event Binding
- TODO Application
- Jquery
- AJAX Calls to Restful API using JQuery

Course Content Section Three Node

- Node Introduction
- JSON
- Arrays And Arrow Functions
- Sync Async
- NPM
- BASIC RESTFUL API with Express

Course Content Section Three Node Cont..

- Intro to Mongo DB
- MongoDB Relationships using mongoose
- Express App Generation (Server Side Rendering With Session Authentication)
- Express RESTFUL API using mongodb
- Express RESTFUL API Authentication And Authorization

Course Content Section Four REACT

React Introduction

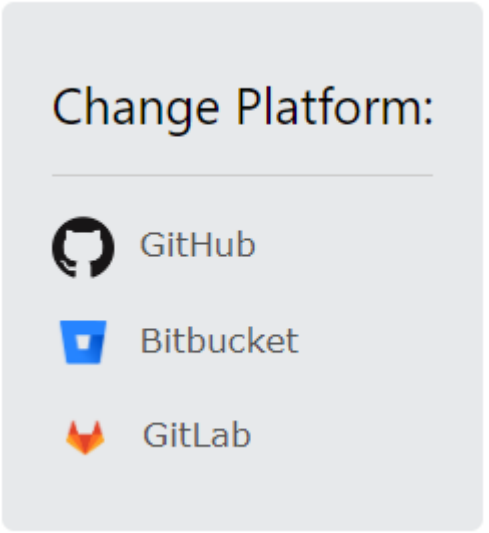
Components

Building a Complete Single Page Web Application using React

- Forms Handling
- Authentication
- Authorization
- Deployment

Git

- Git is a version control system.
  - Tracking code changes
  - Tracking who made changes
  - Coding collaboration
- We Will use github for assignment submissior



> git --version

What does Git do?

- Manage projects with Repositories
- Clone a project to work on a local copy
- Control and track changes with Staging and Committing
- Branch and Merge to allow for work on different parts and versions of a project
- Pull the latest version of the project to a local copy
- Push local updates to the main project

Working with git

- Initialize Git on a folder, making it a **Repository**
- Git now creates a hidden folder to keep track of changes in that folder
- When a file is changed, added or deleted, it is considered **modified**
- You select the modified files you want to **Stage**
- The **Staged** files are **Committed**, which prompts Git to store a **permanent** snapshot of the files
- Git allows you to see the full history of every commit.
- You can revert back to any previous commit.
- Git does not store a separate copy of every file in every commit, but keeps track of changes made in each commit!

Why git

- Over 70% of developers use Git!
- Developers can work together from anywhere in the world.
- Developers can see the full history of the project.
- Developers can revert to earlier versions of a project.

What is GitHub?

- Git is not the same as GitHub.
- GitHub makes tools that use Git.
- GitHub is the largest host of source code in the world, and has been owned by Microsoft since 2018.

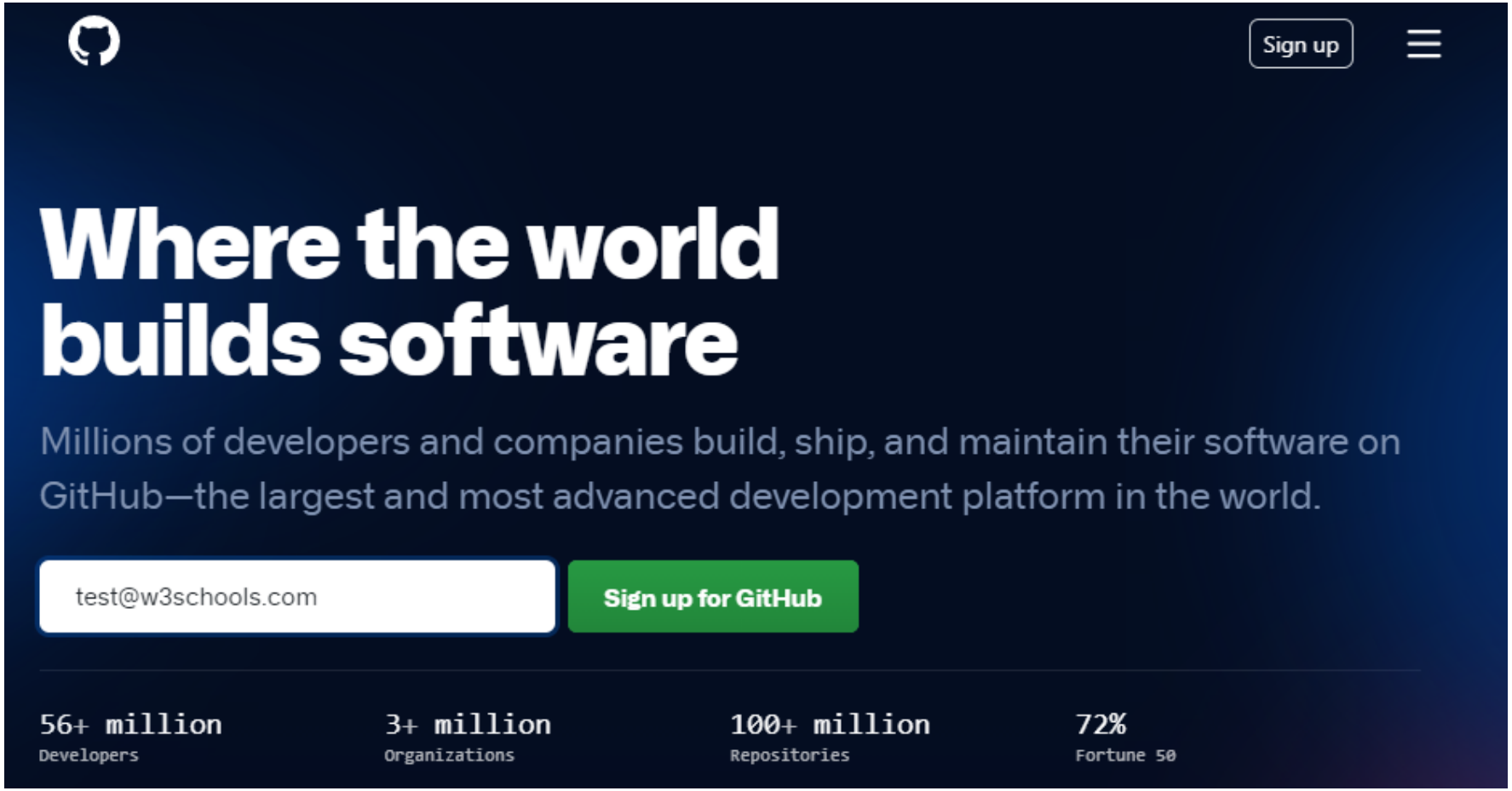
Using Git with Command Line

```
git config --global user.name "w3schools-test"
git config --global user.email test@w3schools.com
mkdir myproject
cd myproject
git init
// Add New files at this stage
git status
```

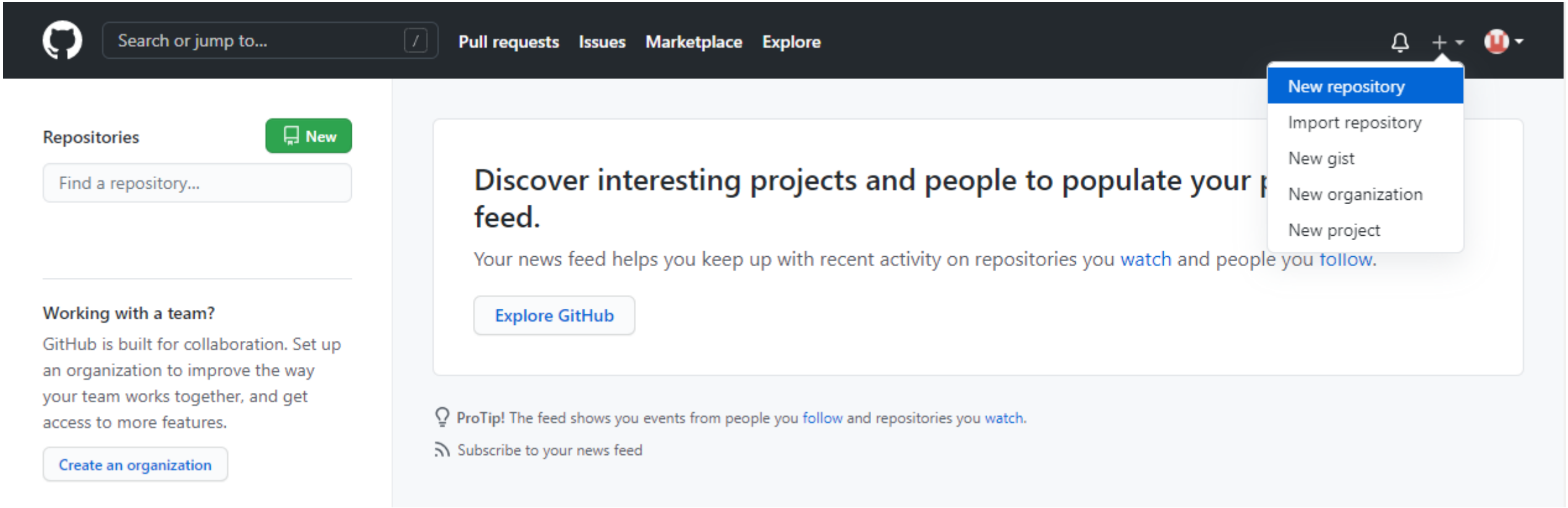
Using Git with Command Line

```
git add . // add all files in current folder

git add –all // add all files

git commit -m "First release of Hello World!“

git commit -a -m "Updated index.html with a new line“ // stage all
//files automatically

git branch hello-world-images // make new branches of the code e.g. one
//for working on backend and one for frontend

git checkout master

git merge emergency-fix
```

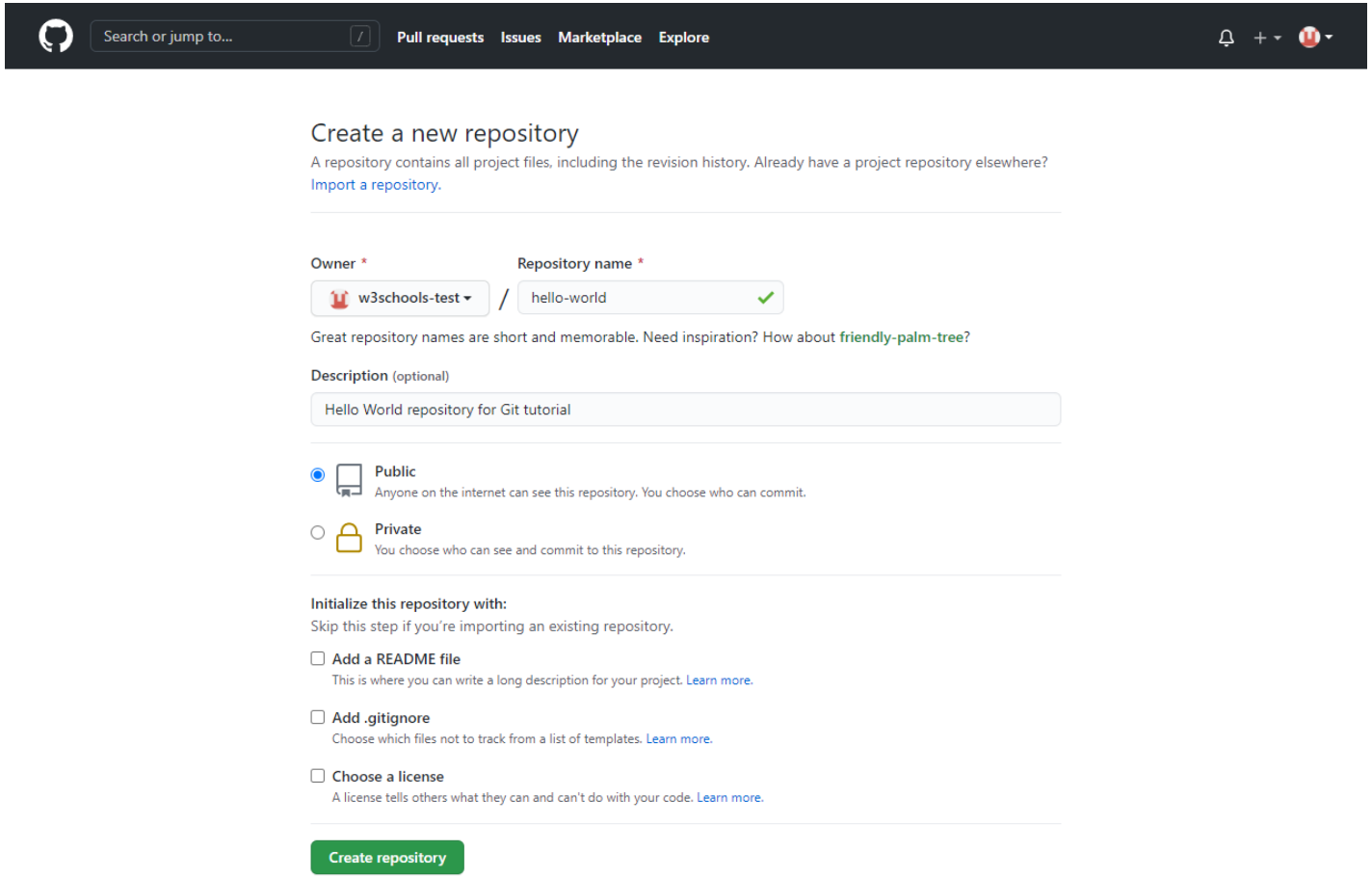
Github


Sign up
Where the world builds software
Millions of developers and companies build, ship, and maintain their software on GitHub—the largest and most advanced development platform in the world.
test@w3schools.com
Sign up for GitHub
56+ million
Developers
3+ million
Organizations
100+ million
Repositories
72%
Fortune 50

Create a Repo on github



Github


Search or jump to...
Pull requests
Issues
Marketplace
Explore
Create a new repository
A repository contains all project files, including the revision history. Already have a project repository elsewhere?
Import a repository.
Owner *
Repository name *
w3schools-test
hello-world
Great repository names are short and memorable. Need inspiration? How about friendly-palm-tree?
Description (optional)
Hello World repository for Git tutorial
Public
Anyone on the internet can see this repository. You choose who can commit.
Private
You choose who can see and commit to this repository.
Initialize this repository with:
Skip this step if you're importing an existing repository.
Add a README file
This is where you can write a long description for your project. Learn more.
Add .gitignore
Choose which files not to track from a list of templates. Learn more.
Choose a license
A license tells others what they can and can't do with your code. Learn more.
Create repository

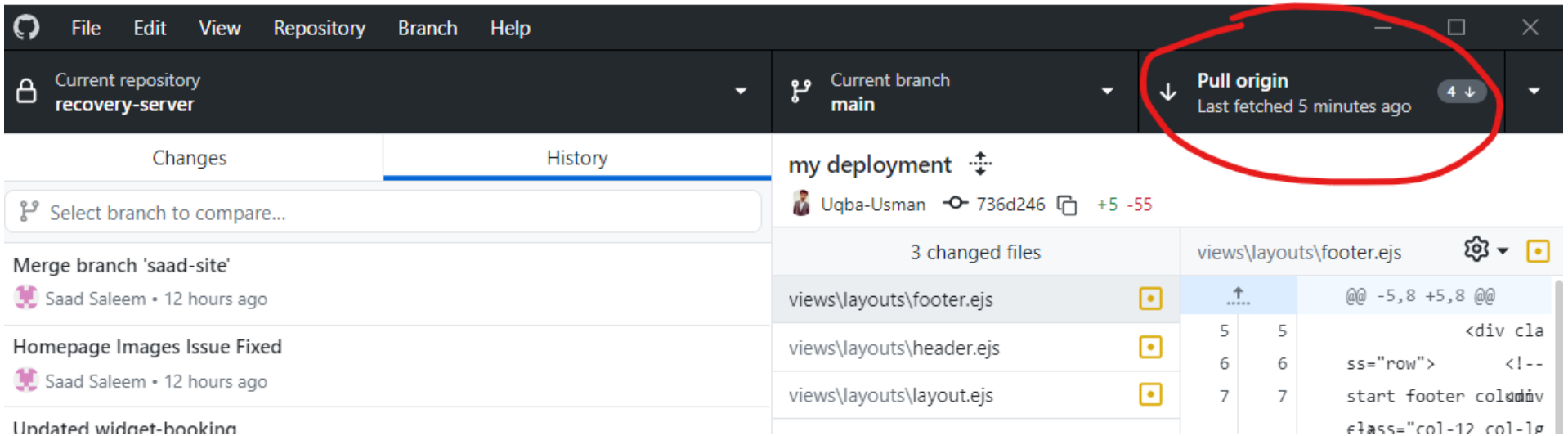
Add local repo to existing github repo

```
git remote add origin https://github.com/w3schools-test/hello-world.git
```

Or Alternatively clone your github repo to local directory

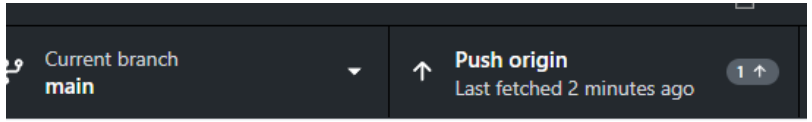
Pulling to Keep up-to-date with Changes

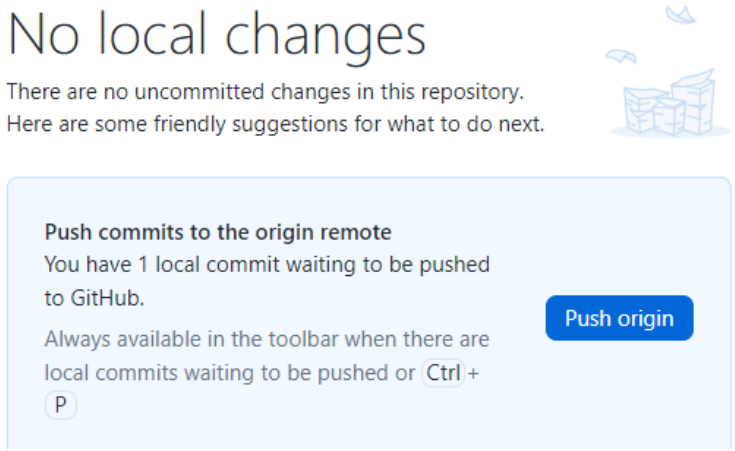
- pull is a combination of 2 different commands:
  - Fetch //gets all the change history of a tracked branch/repo.
  - Merge //merge combines the current branch, with a specified branch.

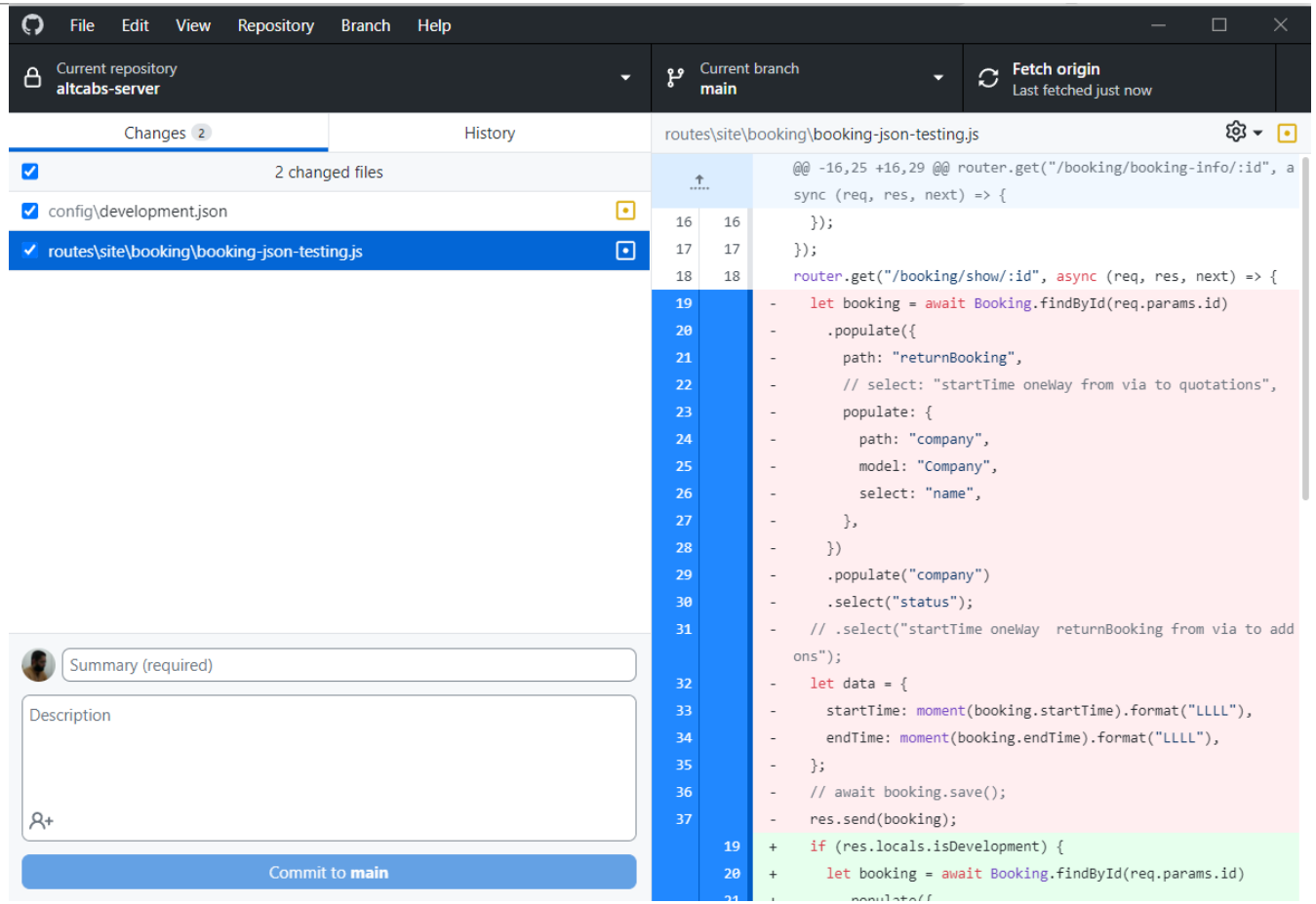


Git Push to GitHub

- Commit Changes
- Push







.gitignore

- git can specify which files or parts of your project should be ignored by Git using a .gitignore file.

```
# ignore ALL .log files
*.log

# ignore ALL files in ANY directory named temp
temp/
```

node_modules # ignore node_modules

Assignments/Lab Task Submissions

Make a Repo on github and submit your link to a google form

- Link is available at https://usmanlive.com/

Your Repo should contain following folder

Assignment1	Lab Task 1	Midterm
Assignment 2	Lab Task 2	Final
Assignment 3	Lab Task 3	
Assignment 4	Lab Task 4	Any other folders for your practice

Course Resources

Visit https://usmanlive.com/

- Videos
- Slides
- Articles
- Whats Group link
- Assignments
- Lab Tasks
- Sample Apps