

CompSci Course

{C0DENATION}

Git & GitHub.

{CODENATION}

Learning Objectives

To recognise the differences between Git and GitHub.

Understand how Git and GitHub work.

Be able to use Git and GitHub using best practises.

Git and GitHub

Same but different.

Often people used Git and GitHub interchangeably, and though they are linked they are fundamentally different.

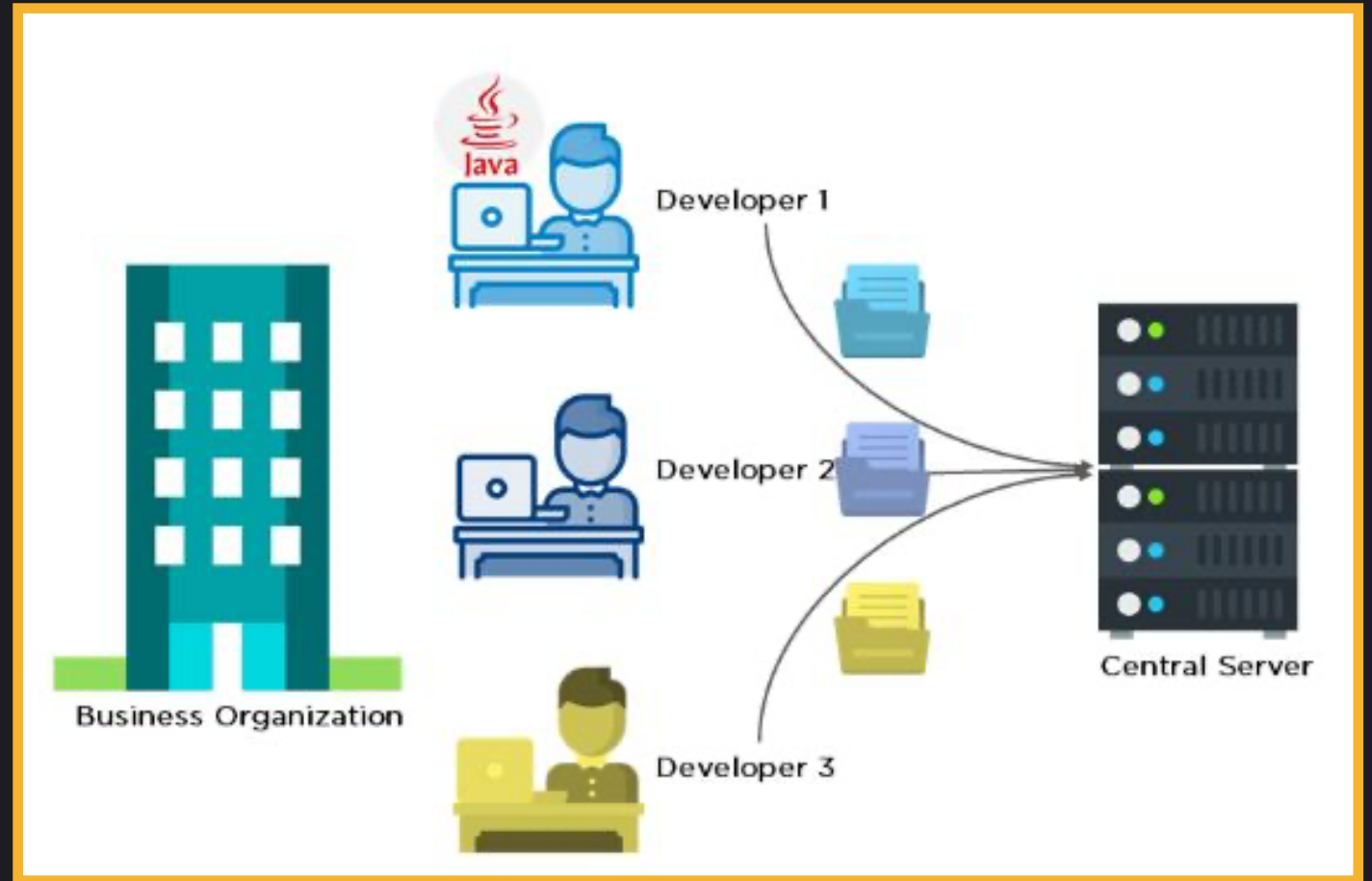
Git is a piece of software for distributed version control, where GitHub is essentially just a user-friendly front-end for viewing (with some other functionality, of course).

Life before...

Before we dive deeper into **Git**, let's first reflect on how development **used** to be carried out.

- Developers would **submit** their **code** to a centralised **server**
- **Changes** were relatively **unknown to other developers** and they relied on comments/a keen eye
- **Limited communication** between developers at times and **conflicts** were more than common

How it used to look...



Life after...

With the help of Git things look different:

- Each developer has their own complete version of the source code on their local machine
- As each developer has their own branch they are able to commit any changes without fear of conflicting with others
 - All changes can be tracked by everyone, always
 - Communication issues are resolved due to the use of branches, and merging protocols
- When a developer has completed their feature it can be merged into the source

How it looks now...



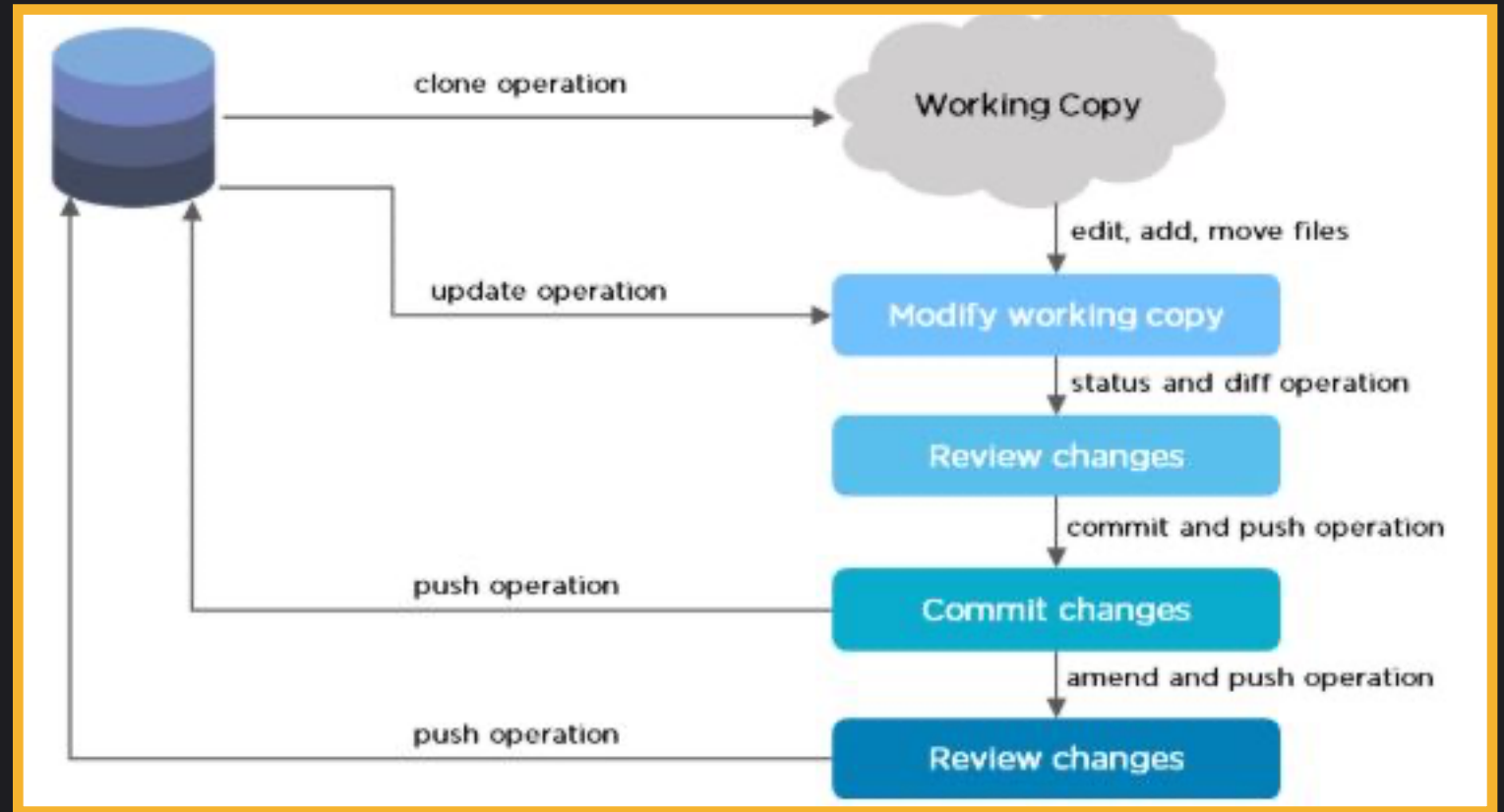
Git

Features of Git...

- Complete history tracking
 - It's free and open source
- Backups can be created easily
 - Completely scalable
- Supports collaboration at it's core
 - Feature branches
- Enables distributed development
- Enables collaboration outside of an organisation
- Supports non-linear development



Workflow at a glance...



Slide for **doodles**...



GitHub


What is **GitHub**?..

GitHub is a **website** and **cloud-based** service which allows developers to both **store** and **manage** their **code**, whilst **incorporating** Git to enable **version control** and it's **complete feature-set**. It should be noted that unlike Git, GitHub is a **for-profit** organisation.



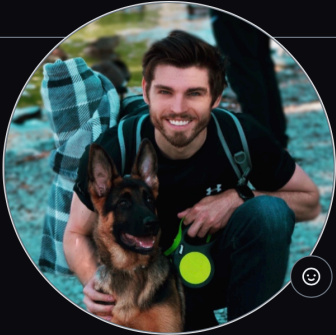
Profile...





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Jordan Crompton

JMCromp

👋 Team-Lead for Front-End and XR Development @wearecodenation. May migrate some of my pseudonymous work at a later date...

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Highlights

☆ PRO

JMCromp / README.md


- 👋 Nothing to see here.

Pinned


 **enigma** Public

A JS based Enigma machine.

● HTML

 **jde-compiler** Public

● Java

 **obfuscation** Public

● CSS

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18 contributions in the last year

Contribution settings ▾

	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mon													
Wed													
Fri													

[Learn how we count contributions](#)


Less More

Contribution activity

2022

Repositories...

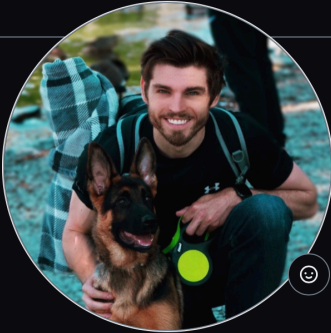




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Highlights
★ [PRO](#)

php-portal [Public](#)
PHP Updated 2 days ago

mern-auth [Public](#)
JavaScript Updated 11 days ago

guava [Public](#)
Forked from google/guava
Google core libraries for Java
Java 10,155 Apache License 2.0 Updated on 5 May

obfuscation [Public](#)
CSS Updated on 7 Jul 2021

enigma [Public](#)
A JS based Enigma machine.
HTML Updated on 25 Jun 2021

Repositories...



main 1 branch 0 tags

Go to file Add file Code

JMCromp Update README.md 928e9c3 on 25 Jun 2021 24 commits

css	temp styling	15 months ago
images	README.md push	15 months ago
js	fixed error reporting	15 months ago
README.md	Update README.md	15 months ago
index.html	temp styling	15 months ago

README.md

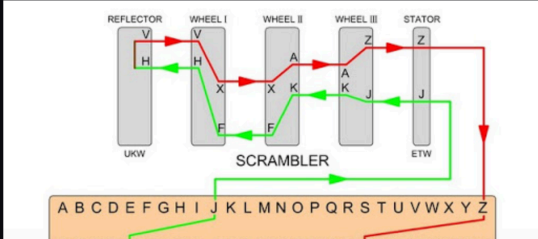
Enigma

JavaScript based representation of the Enigma machine

For educational purposes only

[GitHub Pages live example](#)

NOTE: desperately needs a re-style, don't hate.



About

A JS based Enigma machine.

Readme 0 stars 1 watching 0 forks

Releases

No releases published
[Create a new release](#)

Packages

No packages published
[Publish your first package](#)

Environments 1

[github-pages](#) Active

Languages

HTML 80.3%

JavaScript 14.8%

CSS 4.9%

Repositories...

A screenshot of a GitHub repository page for 'enigma / js / enigma.js'. The page shows the 'main' branch with a commit by 'JMCromp' titled 'first push'. The file 'enigma.js' is selected, showing 114 lines of JavaScript code. The code defines a 'CharMap' class with methods for indexing and swapping characters. The interface includes a 'Go to file' button, a commit history link, and a '1 contributor' section. The code is syntax-highlighted and includes line numbers.

```
1  if (!Array.prototype.indexOf) {
2      Array.prototype.indexOf = function(elt, from) {
3          let len = this.length;
4          from = from || 0;
5          for (;from < len; from++) {
6              if (from in this && this[from] === elt) {
7                  return from;
8              }
9          }
10         return -1;
11     }
12 }
13
14 let CharMap = function(setA, setB) {
15     if (setA.length !== setB.length) {
16         throw new Error("Each CharMap set must be of equal lengths");
17     } else if (new RegExp("[ " + setA.join('') + "]" ).test(setB.join(''))) {
18         throw new Error("CharMap sets cannot contain characters from another set");
19     }
20     this.setA = setA;
21     this.setB = setB;
22 };
23
24 CharMap.prototype.swap = function(c) {
25     let i = this.setA.indexOf(c);
26     if (i >= 0) {
27         return this.setB[i];
28     }
29     i = this.setB.indexOf(c);
30     return i >= 0 ? this.setA[i] : c;
```


History...

JMCromp / **php-portal** Public

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[Code](#) [Issues](#) [Pull requests](#) [Actions](#) [Projects](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

History for **php-portal** / **php** / **uploads.php**

Commits on Sep 21, 2022

Adjusted extension pointer point
JMCromp committed 2 days ago

19c7ff5

Removed md5 hashing of uploads
JMCromp committed 2 days ago

0db0d20

Removed md5 hashing of uploads
JMCromp committed 2 days ago

b9a0ef3

Fixed absolute paths
JMCromp committed 2 days ago


e286e2b

initial upload
JMCromp committed 2 days ago

4f6b8ee

End of commit history for this file

Newer Older

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History...

Removed md5 hashing of uploads

main

JMCrop committed 2 days ago

1 parent e286e2b commit b9a0ef3d0e4576a3653a3aa3061717c5d69a7179

Showing 1 changed file with 3 additions and 2 deletions.

Split Unified

php/uploads.php

@@ -16,8 +16,9 @@

16 16 + \$fileNameCmps = explode(".", \$fileName);

17 17 \$fileExtension = strtolower(end(\$fileNameCmps));

18 18

19 - // sanitize file-name

20 - \$newFileName = md5(time() . \$fileName) . '.' . \$fileExtension;

19 + // sanitise file-name

20 + // \$newFileName = md5(time() . \$fileName) . '.' . \$fileExtension;

21 + \$newFileName = \$fileName . '.' . \$fileExtension;

21 22

22 23 // check if file has one of the following extensions

23 24 \$allowedfileExtensions = array('jpg', 'gif', 'png', 'zip', 'txt', 'xls', 'doc');

0 comments on commit b9a0ef3

Lock conversation

Write Preview

Leave a comment

Attach files by dragging & dropping, selecting or pasting them.

Comment on this commit



GitHub

Let's make an **account**...

Let's all head to [GitHub.com](https://github.com) and create our first **account** (unless you already have one)

When you've created your account **paste a link** to your **profile** in the **#github-links** Discord channel

Feel free to give each other a **follow** if you wish!



git status

(check for changes)

git add .

('approve' all changes)

git status

(check all changes approved)

git commit -m "message here"

(prepare files for commit with a message)

git push

(push the prepared commit to the repo)



Revisiting Learning Objectives

To recognise the differences between Git and GitHub.

Understand how Git and GitHub work.

Be able to use Git and GitHub using best practises.