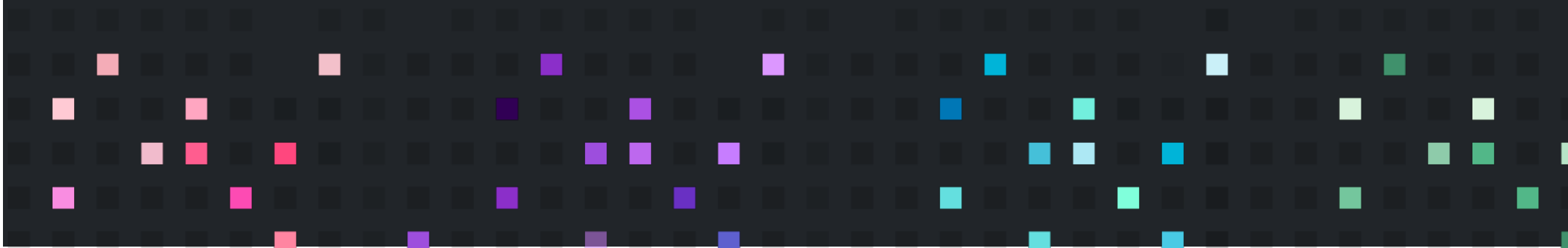# Missing Semester

11/10/2023 | UL Computer Society

Content

- IDE's
- Git
- WSL2
- File Organisation
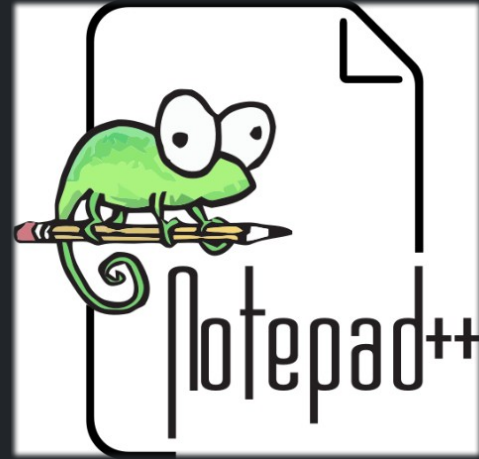
VSCodium

- VSCode but FLOSS (MIT)
- Doesn't contain telemetry
- Plethora of plugins
- vscodium.com

Notepad++

- GNU GPL
- Better than notepad
- Windows Only
- notepad-plus-plus.org

Kate

- LGPL, GPL
- Cross Platform
- Text Editor Like Notepad++
- kate-editor.org

JetBrains

- Proprietary
- Free for students
- Specialized for languages
- Everything *just werks*^{TM}

JetBrains - Setup

- account.jetbrains.com/login
  - Don't use UL e-mail
- Jetbrains Education
  - Blue button "Apply Now"
  - Use UL Email
  - Mail to verify UL email
  - Second mail to either create an account or link to existing
  - Link to account created earlier

JetBrains Toolbox

- Centralized program to manage everything
- Manages:
  - Installations
  - Updates
  - Multiple versions
  - Browser integration
- Groups all projects under one interface
- JetBrains Toolbox

CLI Editors

- Emacs
- Is a Church
- An Operating System

- Vim
- Is a cult
- Not an Operating System

In the Church Of Emacs

There is no wrong choice,
but there is one right choice

Git

- Most important Version Control System
- Git != Gitlab, Github, etc.
- Local
- Remote
  - Gitlab
  - Gitea
  - Github
  - Selfhosted Git Server

Git - Installation

- [Git Download Page](#)
- Windows
  - Download and run .exe
- Linux
  - Use package manager
  - Instruction for each distro on the downloads page
  - e.g `sudo apt install git`

Git - Commands

- git init
- git add
  - Needs to be done after each modification
  - Adds modified files to queue to be committed
- git commit -m <message>
  - commits files in queue & creates new revision
- git remote add origin <URL>
  - *"origin"* is the alias for the remote repo
- git push <remote> <branch>
  - Pushes changes to remote repo
  - e.g git push origin master

Git – Extra's

- Git LFS
  - Large File Storage
  - Saves time and bandwidth when cloning
  - Should be used when uploading binaries (>10 MB)
  - Atlassian guide on LFS and how to use it
- .gitignore
  - Tells git which files/patterns it should ignore
  - Temp files, specific folders

Git GUI's

- Can use a GUI for more convenient/advanced use
- Most editors come with Git integration
- Can use standalone GUI's
  - Github Desktop
  - Gittyup
  - SourceTree
  - Official list of Git GUI's

Git Resources

- Highly Recommended Resource
  - [Pro Git Book](#)
- Gamified Learning
  - [ohmygit.org](#)
  - [learngitbranching.js.org](#)
- General Resource
  - [Atlassian Git Tutorials](#)
- Cheatsheets
  - [GitHub Training](#)
  - [Interactive Git Cheatsheet](#)
- `git help <command>`

WSL 2

- Easy intro to Linux
- Don't need a VM
  - Better performance
  - Less resources used
- Get used to Unix dev environment (bash & other tools)
- Can access Linux files directly from explorer
- Access Windows files from WSL
  - /mnt/c/

Folder Structure

- Consistency matters
  - More productive
  - You'll thank yourself later
  - Others will also appreciate it
- Organize into folders where logical
  - Raw data, particular topic, images, videos

Computer Society

M Misc

S Semester 1

S Semester 2

S Semester 3

S Semester 4

S Semester 5

T Tutorials

S Semester 2.5
Things to do over the summer

S Semester 1

C CS4012
Representation and Modelling

C CS4012-Project
Html project for CS4012

C CS4141
Introduction to Programming

C CS4221
Foundations of Computer Science 1

E ET4011
Fundamentals of Computer Organisation

M MS4111
Discrete Mathematics

C CS4141

Introduction to Programming

📁 Assignment

📁 Labs

📁 Lectures

📁 PSLG

📁 SamplePrograms

📄 CS4141.iml

Check out the folder structure yourselves: gitlab.com/c2842

cs4141 / Assignment

📁 Assignment_01

📁 Assignment_02

📁 Assignment_03

📁 Assignment_04

📄 CS4141 Assignment Overview.docx `LFS`

📄 CS4141 Assignment Part 1 Specification.docx `LFS`

📄 CS4141 Assignment Part 2 Specification.docx `LFS`

📄 CS4141 Assignment Part 3 Specification.docx `LFS`

📄 CS4141 Assignment Part 4 Specification.docx `LFS`

cs4141 / Assignment / Assignment_01

☕ Assignment2021Part1.java

☕ Assignment2021Part1_sample.java

cs4141 / Labs / Lab_02

📄 Lab 2 Lab Sheet.docx `LFS`

📄 Lab 2.pdf `LFS`

☕ Lab02.java

Check out the folder structure yourselves: gitlab.com/c2842

Folder Structure - Projects

- Project File Structures
  - [Small Assignment](#)
  - [Exploratory Project](#)
  - [Massive Project](#)

Folder Structure - Resources

- [Claire Duvallet, MIT PhD Alum, slides on organization](#)
- [The Hitchhiker's Guide To Python - Structuring](#)
- [MIT Broad Research - File Structure](#)

Thank You

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