PORTOFOLIO

Muhammad Naufal Pratama

mhnpratama@gmail.com

https://linkedin.com/in/mnpratamaa

https://github.com/mhnaufal

https://medium.com/@mprtmma

https://mhnaufal.github.io/

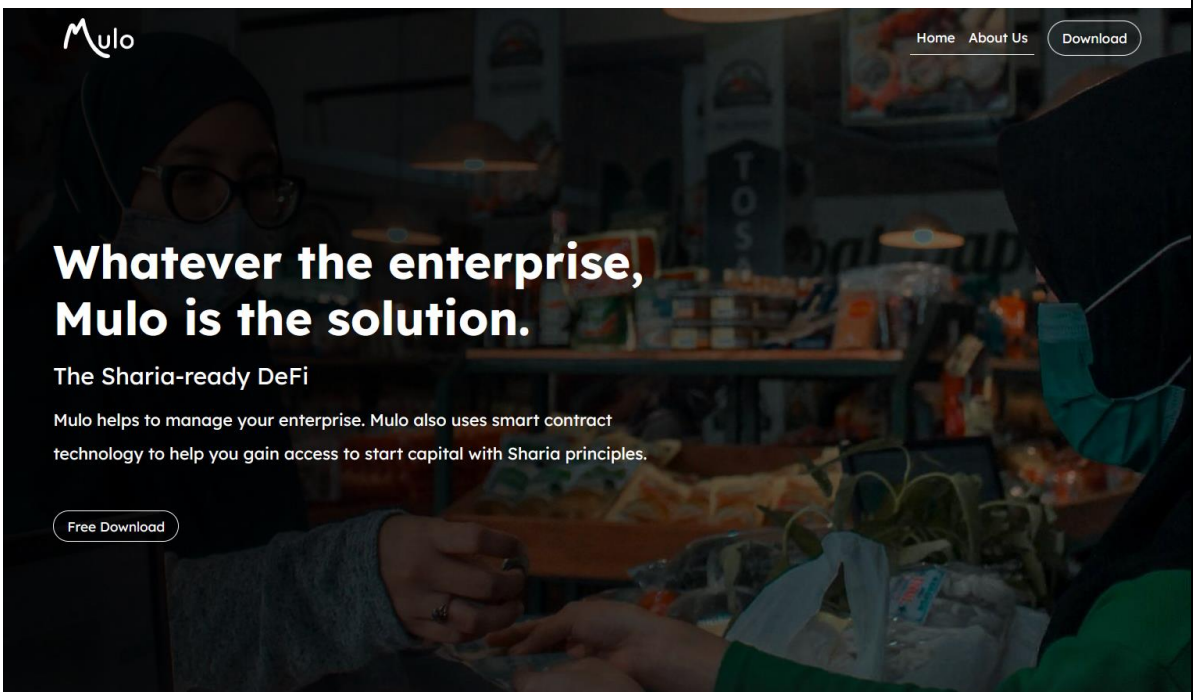
Mulo

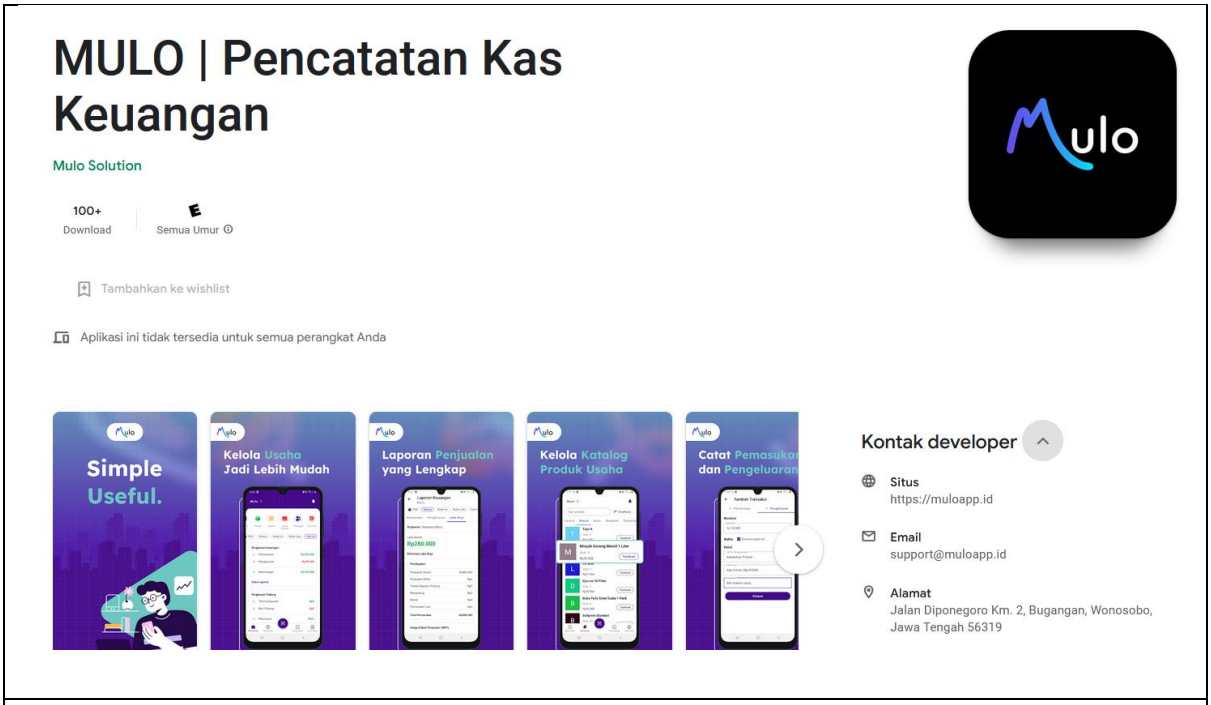
About: Mulo is a startup that develops financial management applications based in Wonosobo. I've been on this team for 1.5 years and was responsible for the backend system made using SailsJS and the android application made using Kotlin.

Tech: NodeJS, SailsJS, Kotlin, Git, MySQL, Insomnia

Link:

- https://muloapp.id/en/
- https://www.instagram.com/mulo.app/?hl=en
- https://play.google.com/store/apps/details?id=app.mulo&hl=en&gl=US&pli=1




MULO | Pencatatan Kas Keuangan
Mulo Solution
100+
Download
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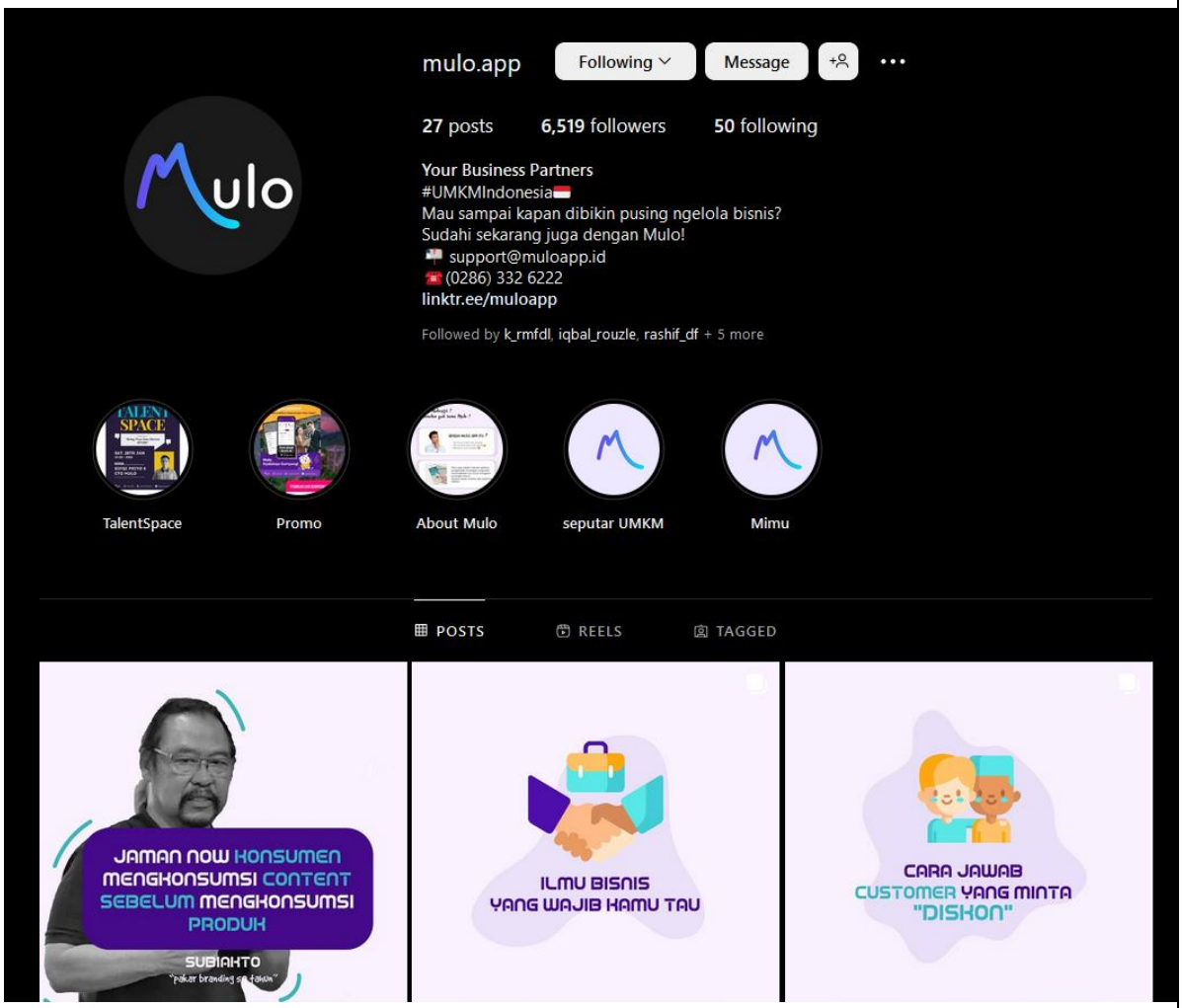
Tambahkan ke wishlist
Aplikasi ini tidak tersedia untuk semua perangkat Anda
Simple Useful.
Kelola Usaha Jadi Lebih Mudah
Laporan Penjualan yang Lengkap
Kelola Katalog Produk Usaha
Kontak developer
Situs
https://muloapp.id
Email
support@muloapp.id
Alamat
Jalan Diponegoro Km. 2, Bugangan, Wonosobo, Jawa Tengah 56319


mulo.app
Following
Message
27 posts
6,519 followers
50 following
Your Business Partners
#UMKMIndonesia
Mau sampai kapan dibikin pusing ngelola bisnis?
Sudahi sekarang juga dengan Mulo!
support@muloapp.id
(0286) 332 6222
linktr.ee/muloapp
Followed by k_rmfdl, iqbal_rouzle, rashif_df + 5 more
TalentSpace
Promo
About Mulo
seputar UMKM
Mimu
POSTS
REELS
TAGGED
JAMAN NOW KONSUMEN MENGKONSUMSI CONTENT SEBELUM MENGKONSUMSI PRODUK
SUBIAKTO
ILMU BISNIS YANG WAJIB KAMU TAU
CARA JAWAB CUSTOMER YANG MINTA "DISKON"

Personal Protective Equipment (PPE) Detection

About: PPE Detection is one of three final projects during my internship at PT Nodeflux Teknologi Indonesia. I worked with the other three members in this project to develop a PPE detection. The PPE detection runs on the web platform, and the purpose of this software is to detect whether there are workers who do not use safety equipment such as helmets and vests. The detection is done using deep learning models. My role for this project is Software Engineer, who manages the software architecture and codebase.

Tech: Python, Streamlit, Tensorflow, Git

Link:

- https://www.linkedin.com/posts/christianale_personal-protective-equipment-prd-visionaire-activity-7015619743797694464-b901?utm_source=share&utm_medium=member_desktop

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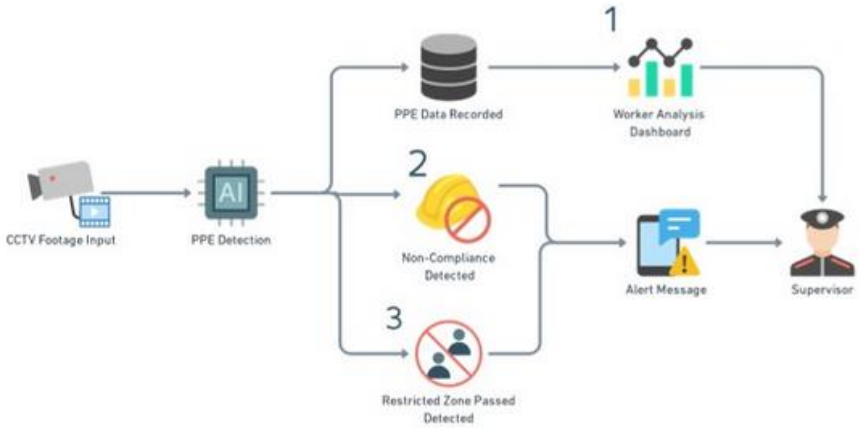
Extending Vision Beyond Imagination

Product Use Case

"As a user, I want to **know whether each worker always uses their PPE properly or not** so that I can take actions that ensure their safety". From this user story, there are three use cases where this knowledge can be used.



1. **Worker Analysis**
   Automatically gather and provide information about each worker's compliance score and events that happened over time.
2. **PPE Non-Compliance Alert**
   Automatically sends an alert message to the supervisor when non-compliant workers are detected.
3. **Restricted Zone Alert**
   Automatically sends an alert message to the supervisor when the restricted zone is passed by unauthorized workers.

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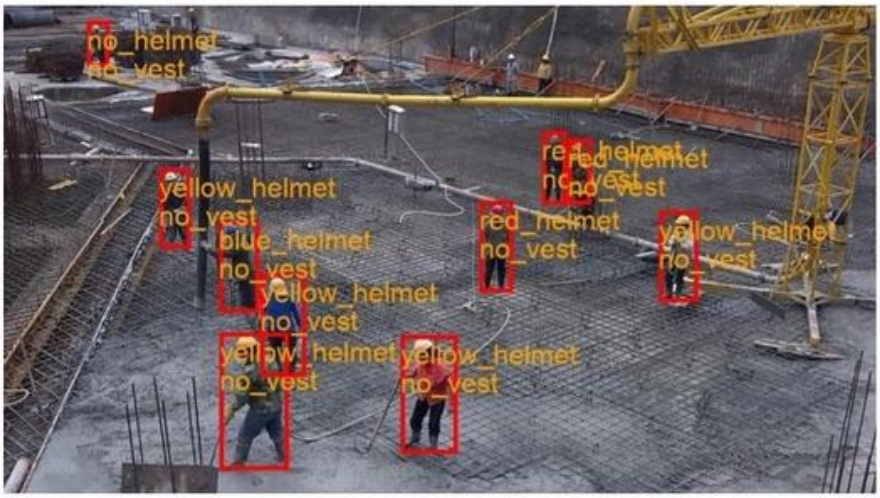
User Interface

Example of Output Image



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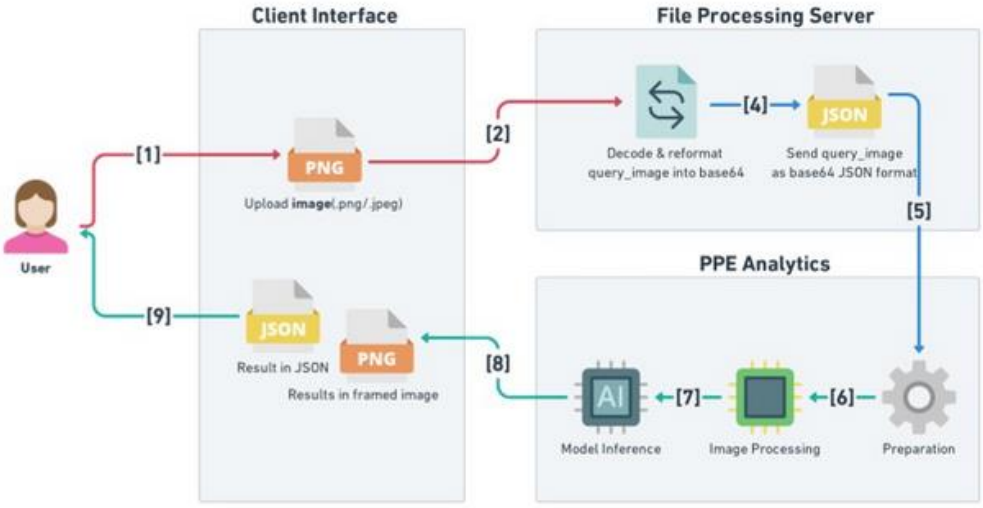
Software

The software will be a website where the user can:

1. Upload the image from the user
2. Process the file as API input, send the API request, and receive the API response
3. View the result in JSON and image with the bounding boxes



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Software Defect Prediction

About: Software defect prediction is an Undip research focused on detecting defects in software using machine learning models and deep learning. We worked as a team of 5 people, and here I contributed. I worked as the programmer who did the code and helped others write the final paper.

Tech: Python, Tensorflow, Git

Link:

- https://github.com/mhnaufal/Software-Defect-Finale
- https://github.com/mhnaufal/Software-Defect-Finale/blob/main/reports/PAPER-Software%20Defect%20Prediction.pdf

Software Defect Prediction

Machine learning model for *'Software Defect Prediction'* using deep learning and based on Python & Tensorflow

Introduction

- Datasets

  Datasets for this project taken from PROMISE public dataset

- Models

  CNN, RNN, LSTM, Random Forest, and more

- Results

  Results directory

  Paper

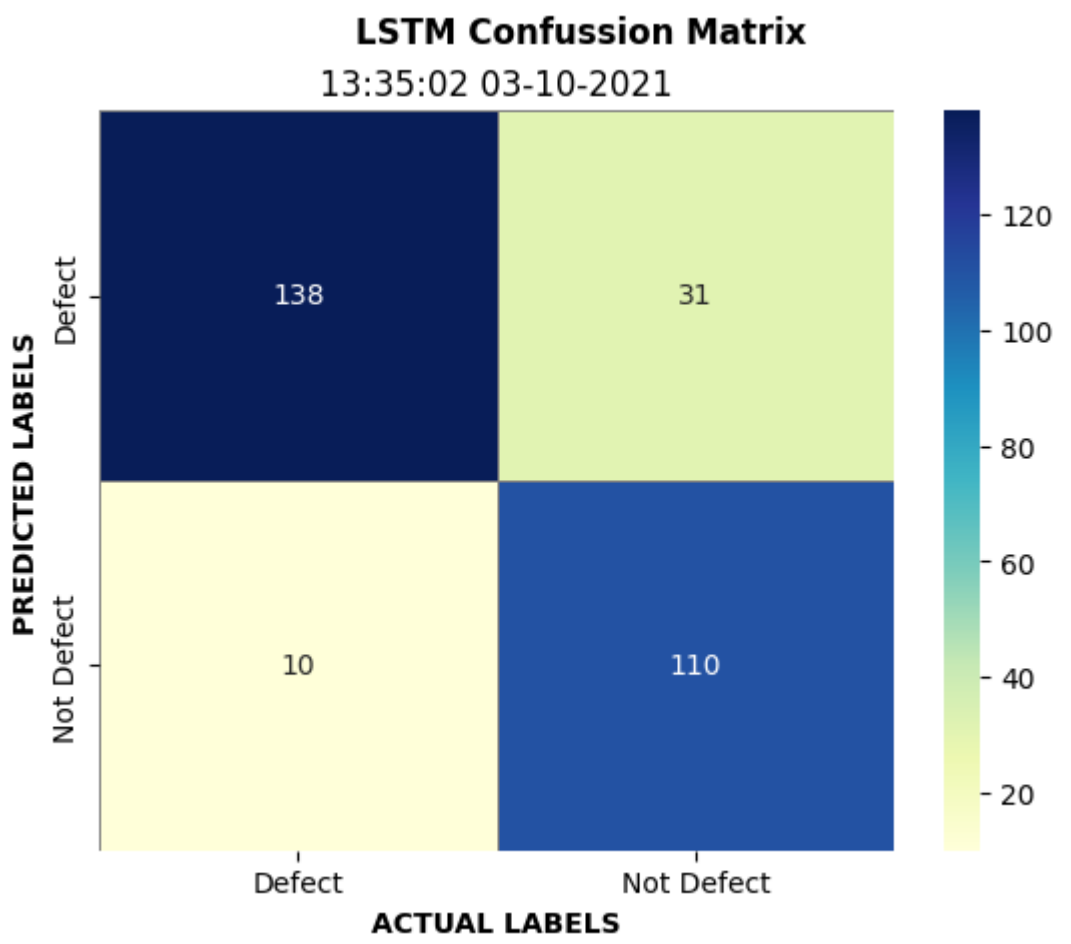
  Results from running model(s) shown in reports folder

Project Structure

```
|datasets
├── processed
|   └── big_data1.csv
|   └── big_data2.csv
|   └── pc4.csv
|   └── pc3.csv
|   └── ...
├── raw
    └── ...

|references
└── README.md

|reports
├── figures
|   └── confussion matrix
|       └── random_forest.png
```


LSTM Confussion Matrix
13:35:02 03-10-2021
PREDICTED LABELS
Defect
Not Defect
138
31
10
110
Defect
Not Defect
ACTUAL LABELS
120
100
80
60
40
20

Software Defect Prediction Using Deep Learning

Achmad Iqbal Al Faizin[1, a)], Edy Suharto[1, b)], Aris Puji Widodo[1, c)], Hendinur Faizal[1, d)], Muhammad Naufal Pratama[1, e)], Raihan Mufadhal[1, f)], and Rafli Azra Virendra Azhari[1, g)]

Author Affiliations
[1]*Department of Computer Science/Informatics, Diponegoro University, Semarang, Indonesia*

Author Emails
[a)] *iqbalrouzle@students.undip.ac.id*
[b)] *edys@lecturer.undip.ac.id*
[c)] *arispw@gmail.com*
[d)] *hendinurfaizal@students.undip.ac.id*
[e)] *muhammadnaufalp@students.undip.ac.id*
[f)] *rmfdl@students.undip.ac.id*
[g)] *rafliazra@students.undip.ac.id*

Abstract. In the process of software development, a defect is often present but hard to detect if the software in development is complex. This could be a problem for customers or the end user. To increase the reliability of the software a plethora of methods can be used to detect these defects, one of them is using deep learning. The use of deep learning can help us to extract features automatically using a neural network instead of extracting them manually. The dataset used for this paper is taken from the public PROMISE repository. The result of this research will be gauged against preceding methods on its effectiveness.

KEYWORDS

Software defects, machine learning, deep learning.

INTRODUCTION

Software defect is a condition where a software product is not up to the standards of softwares or when the software is not working as expected of the end user. In other words, a defect is an error in the coding or logic that causes the program to not function properly or have outcomes that are wrong or unexpected.

Software defect is also defined as an error happening to the software because of a faulty code, documentation, or to the design that causes a failure in the software's performance. By making predictions on software defects, the expected outcome is to decrease the chances of a software to experience failure mostly during production so that it will be easier when testing occurs.

To detect the defects in the softwares, we are using two approaches, first using machine learning and secondly using deep learning algorithms. Using these methods, we will compare which model from the two approaches that will hold the better outcome. The dataset that will be used in this research are from the PROMISE public dataset

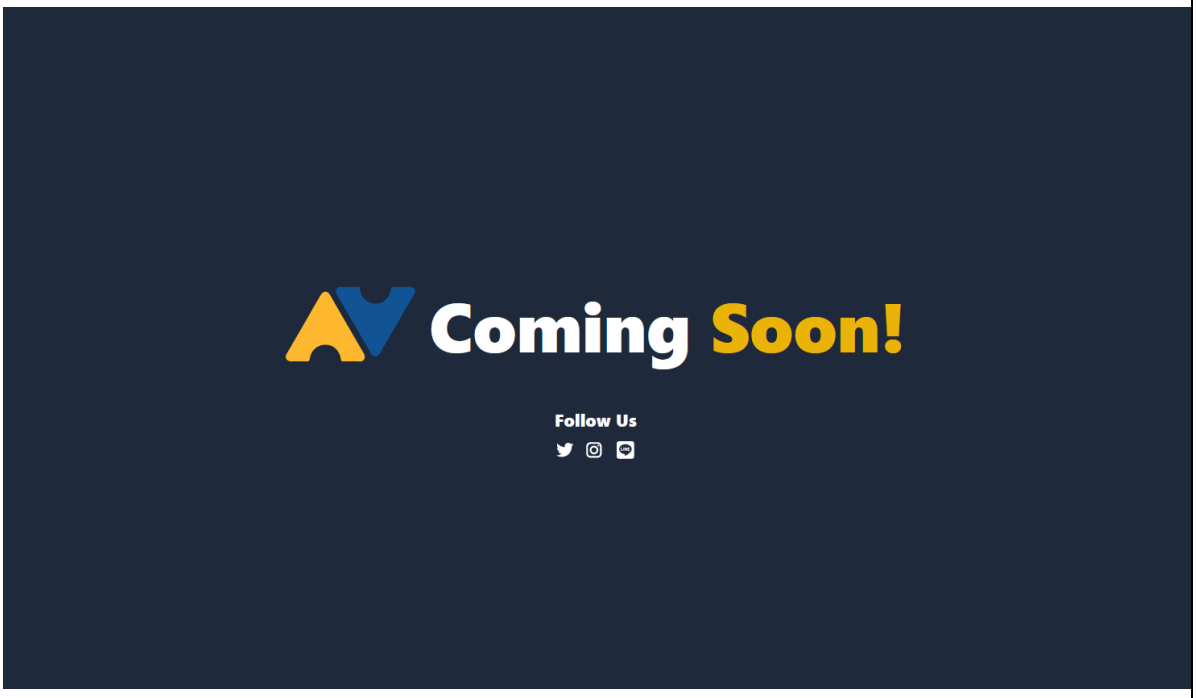
Anforcom 2023

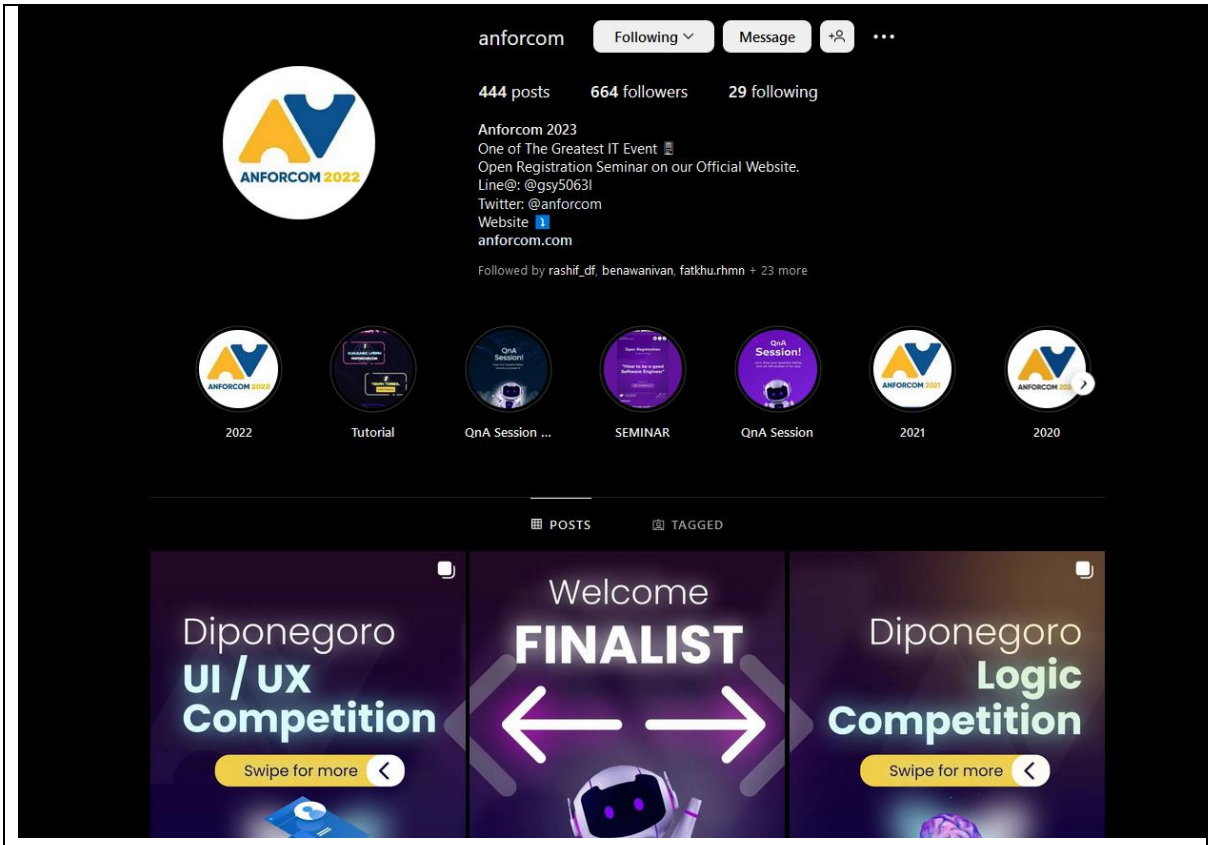
About: Anforcom is an IT event and competition held annually by Informatics students of Universitas Diponegoro. In this team project, with the other 5 members, I was responsible for the backend system of Anforcom. Using Laravel, MySQL, Git, and hosting providers, we deliver the website to the participants so that they can get more information about Anforcom and register for the events and competitions.

Tech: Laravel, PHP, MySQL, Git

Link:

- https://www.anforcom.com/




anforcom
Following
Message
444 posts
664 followers
29 following
Anforcom 2023
One of The Greatest IT Event
Open Registration Seminar on our Official Website.
Line@: @gsy5063l
Twitter: @anforcom
Website
anforcom.com
Followed by rashif_df, benawanivan, fatkhu.rhmn + 23 more
2022
Tutorial
QnA Session ...
SEMINAR
QnA Session
2021
2020
POSTS
TAGGED
Diponegoro
UI / UX
Competition
Swipe for more
Welcome
FINALIST
Diponegoro
Logic
Competition
Swipe for more

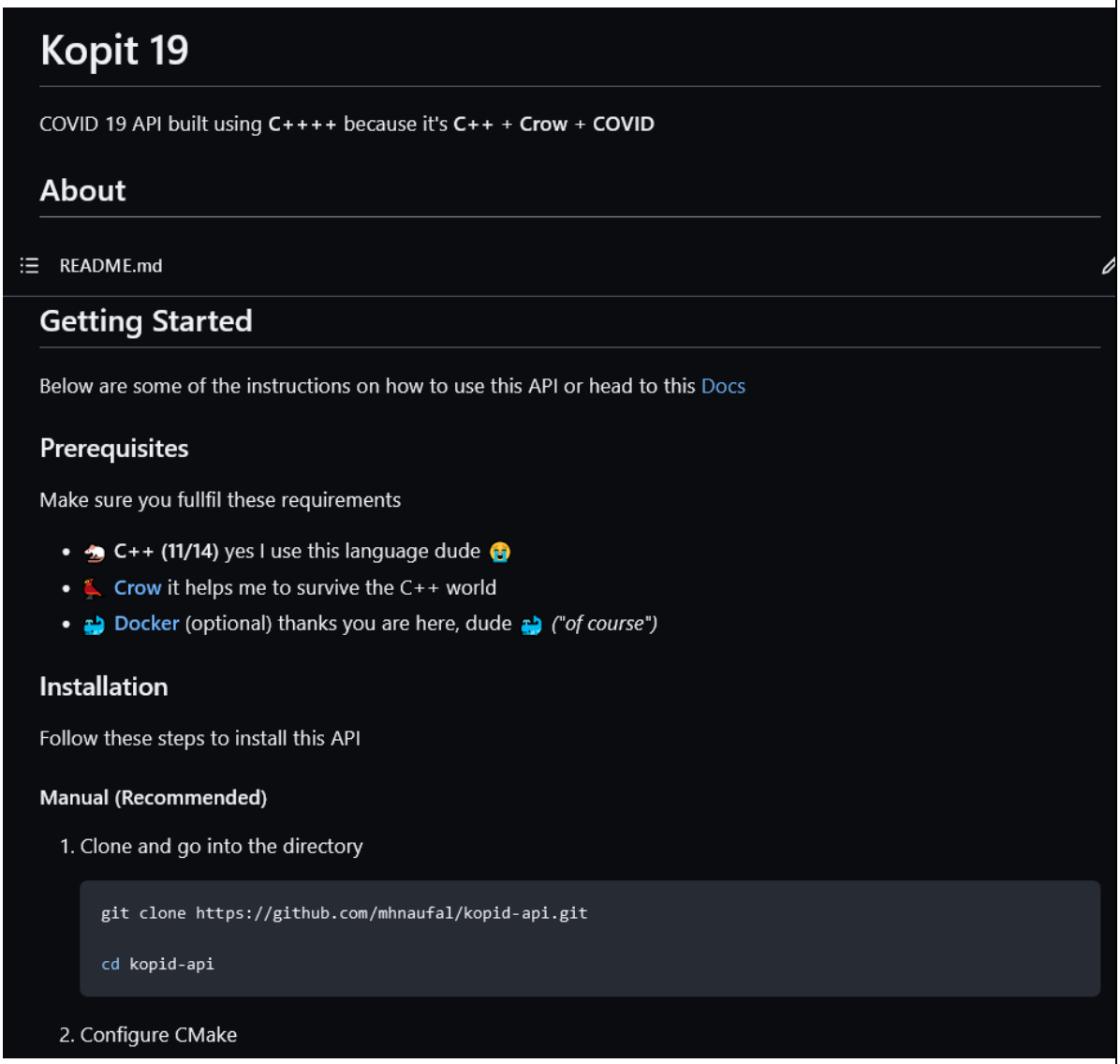
Miscellaneous

About: A Covid-19 API made using the hardest programming language syntax to read, C++

Tech: C++, Docker, CMake

Link:

- https://github.com/mhnaufal/kopid-api



Kopit 19

COVID 19 API built using **C++++** because it's **C++** + **Crow** + **COVID**

About

README.md

Getting Started

Below are some of the instructions on how to use this API or head to this Docs

Prerequisites

Make sure you fullfil these requirements

- **C++ (11/14)** yes I use this language dude
- Crow it helps me to survive the C++ world
- Docker (optional) thanks you are here, dude *("of course")*

Installation

Follow these steps to install this API

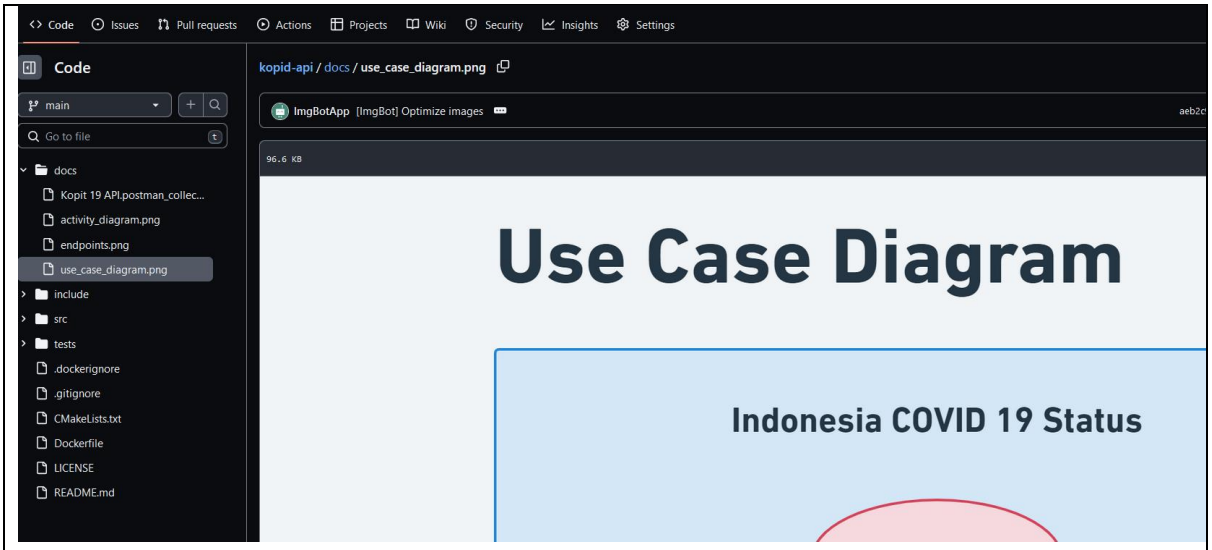
Manual (Recommended)

1. Clone and go into the directory

```
git clone https://github.com/mhnaufal/kopid-api.git

cd kopid-api
```

2. Configure CMake


Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
Code
main
Go to file
docs
Kopit 19 API.postman_collec...
activity_diagram.png
endpoints.png
use_case_diagram.png
include
src
tests
.dockerignore
.gitignore
CMakeLists.txt
Dockerfile
LICENSE
README.md
kopid-api / docs / use_case_diagram.png
ImgBotApp [ImgBot] Optimize images
96.6 KB
Use Case Diagram
Indonesia COVID 19 Status

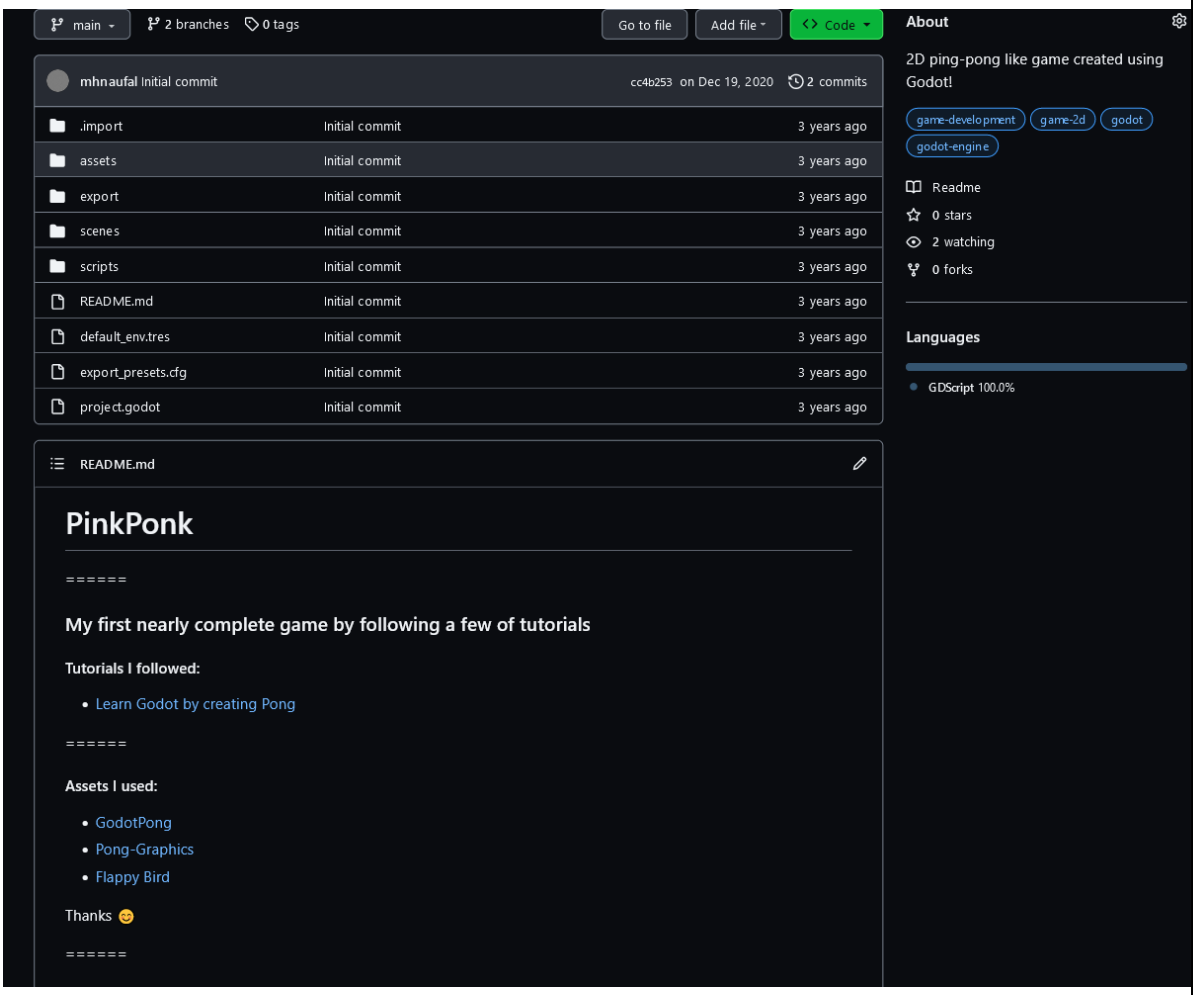
Game Related

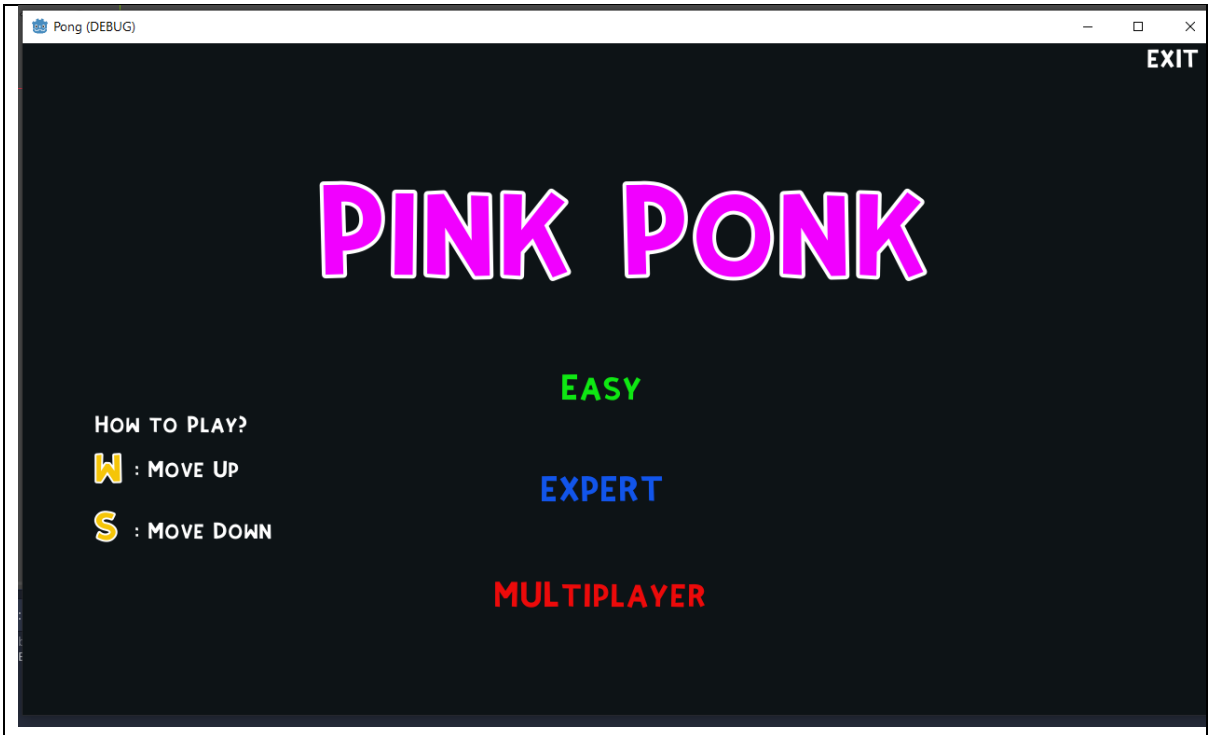
About: Some of game related projects I made. Although it's not much, I learn much from them.

Tech: Godot, C,

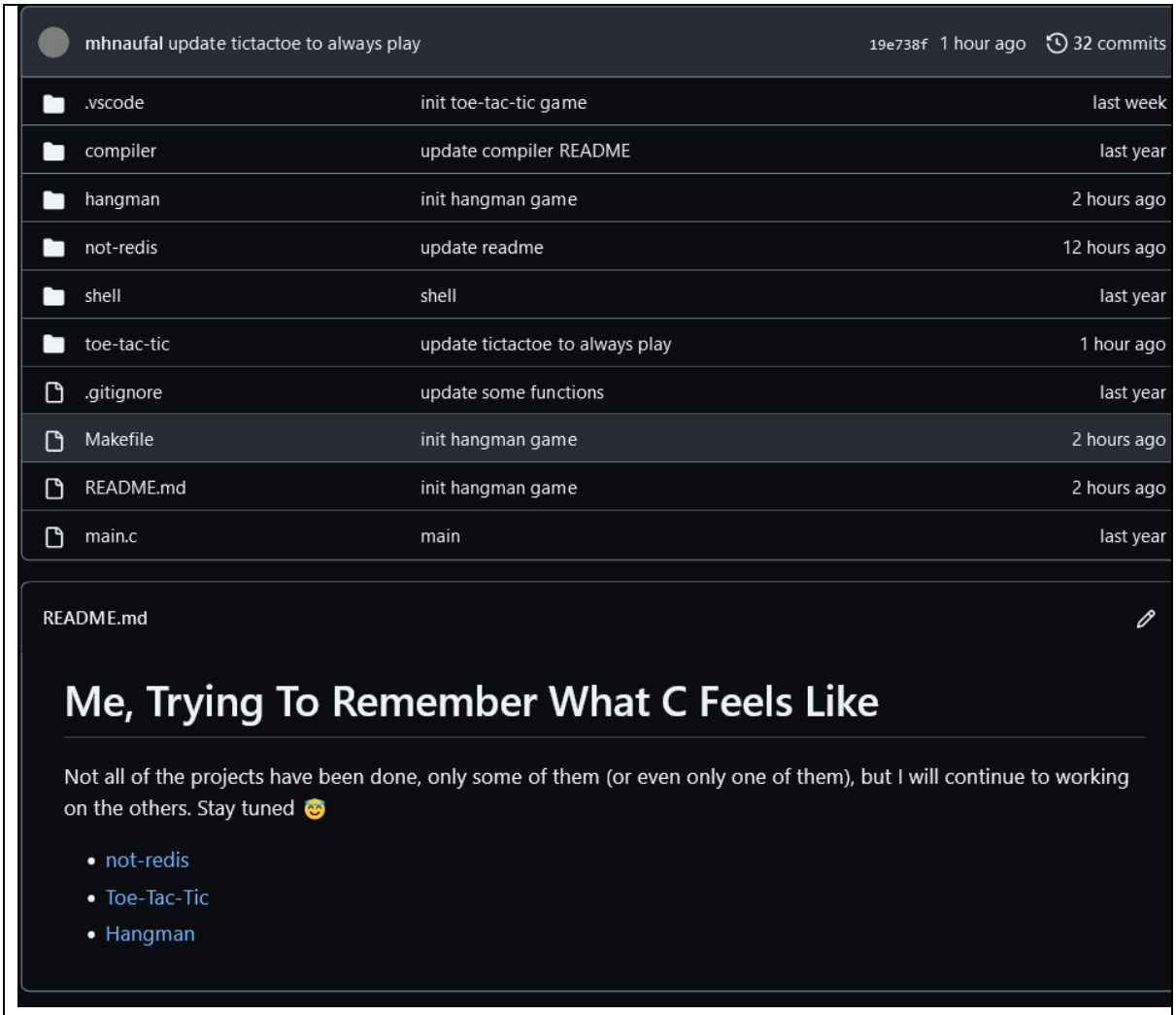
Link:

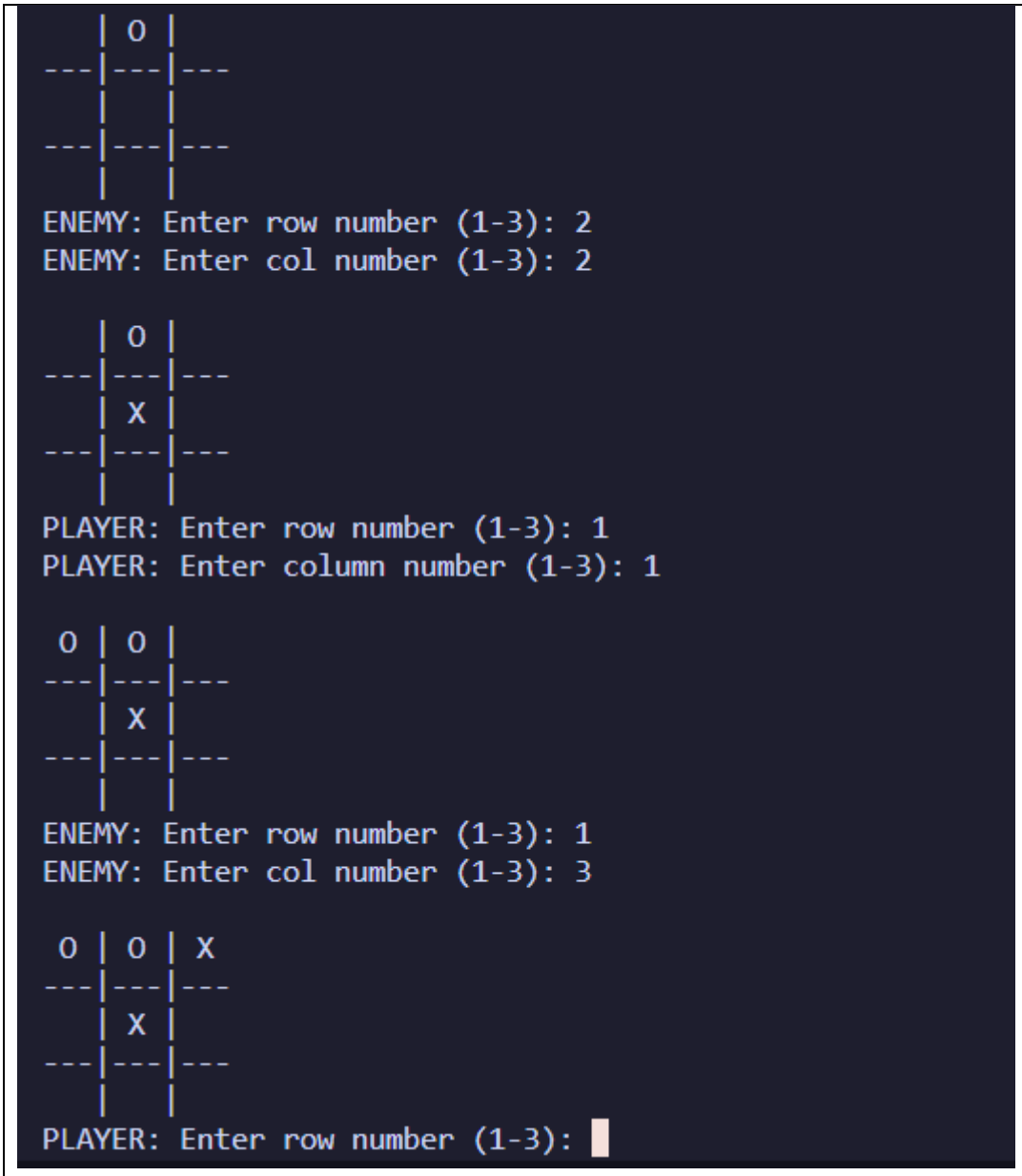
- https://github.com/mhnaufal/PinkPonk
- https://github.com/mhnaufal/nothing-to-c




Pong (DEBUG)
EXIT
PINK PONK
EASY
HOW TO PLAY?
W : MOVE UP
S : MOVE DOWN
EXPERT
MULTIPLAYER


Pong (DEBUG)
0
2


mhnaufal update tictactoe to always play
19e738f 1 hour ago
32 commits
.vscode
init toe-tac-tic game
last week
compiler
update compiler README
last year
hangman
init hangman game
2 hours ago
not-redis
update readme
12 hours ago
shell
shell
last year
toe-tac-tic
update tictactoe to always play
1 hour ago
.gitignore
update some functions
last year
Makefile
init hangman game
2 hours ago
README.md
init hangman game
2 hours ago
main.c
main
last year
README.md
Me, Trying To Remember What C Feels Like
Not all of the projects have been done, only some of them (or even only one of them), but I will continue to working on the others. Stay tuned 😇
not-redis
Toe-Tac-Tic
Hangman


| O |
---|---|---
| |
---|---|---
| |
ENEMY: Enter row number (1-3): 2
ENEMY: Enter col number (1-3): 2
| O |
---|---|---
| X |
---|---|---
| |
PLAYER: Enter row number (1-3): 1
PLAYER: Enter column number (1-3): 1
O | O |
---|---|---
| X |
---|---|---
| |
ENEMY: Enter row number (1-3): 1
ENEMY: Enter col number (1-3): 3
O	O	X
X
PLAYER: Enter row number (1-3):