

# Bilal Eddinaoui

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## EDUCATION

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**1337 Coding School**

*Computer Science*

*Khouribga, Morocco*

## PROJECTS

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### [WebServ](#) - HTTP/1.1 web server - C++

- Capable of handling GET, POST and DELETE requests using an event-driven architecture with Kqueue.
- Static file serving and dynamic content generation using CGI with support of (php, py, js, pl, sh) file extensions.
- Support for cookies and session management with two dynamic applications in C++ and Python as examples.

### [Inception](#) - System Administration - Docker

- Created a docker-based WordPress LEMP stack Website using docker-compose on Debian.
- Separated each service into a dedicated container (Nginx, Wordpress+PHP, MariaDB, Adminer, FTP-server, GOAccess, Redis-Cache).
- Configured NGINX to use SSL and set up multiple docker-volumes for efficient storage all inside one network.

### [Ft Transcendence](#) - Online Multiplayer Gaming Platform - TypeScript, Python

- Capable of running multiple games between different users concurrently using Django.
- Offers Complete Users management system with three different authentication methods.
- All run on top of docker using multiple containers for each service.

### [Trading-Client](#) - High-Performance Trading System - C++

- Built a real-time order execution and management system for crypto trading.
- Implemented WebSocket-based market data streaming.
- Used the Deribit API to retrieve market data and execute trades.

### [MetalC64](#) - Emulator of the Commodore 64 home computer (C64) - C

- Implemented complete CPU emulation, memory management, hardware timing simulation with partial accuracy
- Developed a custom debugger which lets you view the contents of RAM, VIC-II registers, CIA 1 and 2 registers

### [Ft nmap](#) - Ports scanning tool - C

- Support the SYN, ACK, FIN, NULL, XMAS, and UDP scans
- Able to identify services by comparing ports and transport protocols to the NMAP services-database
- Provided a set of options to Customize scan behavior like specifying custom TCP flags combinations

### [MiniShell](#) - Unix Shell - C

- Provided basic shell features such as command execution, piping and redirection.

### [Trc Route](#) - Network traceroute utility - C

- Developed a network diagnostic tool to trace packet routes using raw sockets..

### [6502 CPU Emulator](#) - Emulator of the MOS 6502 8-bit CPU - C

- Fully supports all 151 instructions, 13 addressing modes, and cycle accuracy.
- Added visualisation using the Ncurses library, allowing for real-time observation of the CPU behavior.

## SKILLS & INTERESTS

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- **Skills:** DevOps, Full Stack Web Development, JavaScript, Python, Django, Version Control (Git), C, C++, Software Development, Object Oriented Programming, Network & system administration