Rachit Tanwar

Delhi

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Education

Chandigarh Engineering College, CGC Landran	**Aug. 2023 – Present**
Bachelor of Technology in Computer Science	*Mohali, Punjab*
Kendriya Vidyalaya No. - 3	**2021 – 2022**
XII - 80%	*Delhi Cantt., Delhi*
Kendriya Vidyalaya No. 3	**2019 – 2020**
X - 81%	*Delhi Cantt., Delhi*

Relevant Coursework

- Data Structures
- Algorithms Analysis
- Artificial Intelligence
- Operating Systems
- Internet of Things
- Database Management
- Computer Networks
- Computer Architecture

Projects

Keeb | *Python, Curses, Tabulate*
- Developed a terminal-based Typing Speed Test application using Python and curses for real-time, text-based user interaction.
- Created a CSV-based history log storing test results (WPM, accuracy, mistakes, etc.), with a built-in history viewer using the tabulate library.
- Integrated clean retry logic, CLI prompts, and tabular result presentation to enhance user experience.
- Implemented WPM, accuracy, mistake tracking, and dynamic timing with user-selectable time limits (15, 30, 60 seconds).

Tux Shell | *C*
- Created a simple Unix-like command line shell using C programming language, having a robust command parser that tokenizes user input.
- Implemented common commands like cd, help, custom implementation of grep, exit, to provide core shell functionality without requiring external processes and a command history management system.
- Implemented piping by creating child processes connected via Unix pipes allowing inter-process communication.

Web Server | *C*
- Developed a basic HTTP web server in C from scratch, demonstrating low-level network programming skills using raw sockets (socket, bind, listen, accept).
- Implemented support for HTTP GET requests, serving static HTML content directly from the file system.
- Performed manual parsing of HTTP requests without relying on external libraries, reinforcing knowledge of network protocols and memory management in C.
- Utilized Unix system calls to handle concurrent client connections using fork, showcasing understanding of process creation and basic concurrency.

Technical Skills

Languages: Python, C, C++, HTML, CSS, SQL, Bash
Technologies/Frameworks: Linux, MySQL, SQLite, Flask, Ollama, Langflow
Developer Tools: Neovim, Git, Github

Certifications

- LFS101 : Introduction to Linux
- Rust for Beginners
- Automate the Boring Stuff with Python Programming

Leadership / Extracurricular

Delhi Chess Club	**2022 – Present**
Co-admin	

- Manage an online chess club of 200+ members.
- Manage and organize monthly online chess tournaments on lichess.org
- Manage and organize frequent physical offline meet-ups.