This repository contains a series of C programming projects I have completed, demonstrating a comprehensive understanding of various programming concepts. The projects cover a wide range of topics, including:

Basic Programming Concepts: Exercises to reinforce understanding of variables, control structures, and functions.

String Manipulation: Tasks focused on operations such as concatenation, searching, and substring extraction.

Data Structures and Algorithms: Implementation of linked lists, stacks, queues, binary trees, sorting algorithms (e.g., quicksort, mergesort), and search algorithms (e.g., binary search).

System Calls and File I/O: Projects involving direct interaction with the operating system through system calls and file operations.

Memory Management: Exercises on manual memory allocation, pointers, and understanding memory leaks.

Recursive Programming: Problems that require recursive solutions to deepen understanding of this technique.

Unix Utilities: Development of basic Unix-like command-line tools, reinforcing command-line interface understanding and usage.

Advanced Topics: Exploration of multi-threading, network programming, and basic cryptographic functions.

These projects highlight my ability to tackle challenging problems and write efficient, reliable, and maintainable code, showcasing a solid foundation in C programming.