\*\*Project Title\*\*: Binary, Decimal, and Hexadecimal Conversion Utility in C

\*\*Description\*\*:

In this project, I implemented custom functions in C for converting between decimal, binary, and hexadecimal number systems. The program includes efficient algorithms to handle the conversion process and supports large numbers up to 16 bits. I created functions to:

- Convert decimal numbers to binary using dynamic memory allocation.

- Convert binary back to decimal by calculating powers of two.

- Convert decimal numbers to hexadecimal.

- Convert hexadecimal back to decimal using powers of sixteen.

- Display the binary and hexadecimal numbers in a formatted and user-friendly manner.

This project demonstrates my proficiency in bitwise operations, memory management with `malloc`, and data representation across multiple number systems, all critical skills for low-level programming and system design. I also showcased my ability to work with modular code by separating function implementations into header and source files.

\*\*Skills Gained\*\*:

- C programming

- Dynamic memory management

- Binary, decimal, and hexadecimal conversions

- Modularity in software development

- Problem-solving with number systems

This project highlights my strong foundation in fundamental computer science concepts, making me a suitable candidate for an internship in software development or system programming.