Basis Calculator

This code is a basis calculator that allows users to convert between binary and hexadecimal numbers. Here's an overview of the program's functionality:

Menu options

1. Convert Binary to Hexadecimal: insert a binary number as input and the program will convert it to its hexadecimal representation.
2. Convert Hexadecimal to Binary: insert a hexadecimal number and the program will convert it to its binary representation.
3. Exit: Allows to exit the program.

How to Use

1. Run the program.
2. Choose an option from the menu by entering the corresponding number, the options are:
    a. Option 1: Convert a binary number to a hexadecimal number.
    b. Option 2: Convert a hexadecimal number to a binary number.
    c. Option 3: Exit the program.
3. Follow the instructions and insert the binary or hexadecimal number, depending on the selected option.
4. The program will display the result of the conversion.

Conversion Process

The program uses various methods to perform conversions:

Binary to Hexadecimal: Divides the binary input into groups of four digits, converts each group to decimal, and then converts the decimal values to their corresponding hexadecimal representation.

Hexadecimal to Binary: Converts each hexadecimal digit to decimal and then converts the decimal value to a four-digit binary representation.

Notes

Ensure valid input to achieve accurate conversions.

The program handles invalid input by notifying you to enter the correct format.