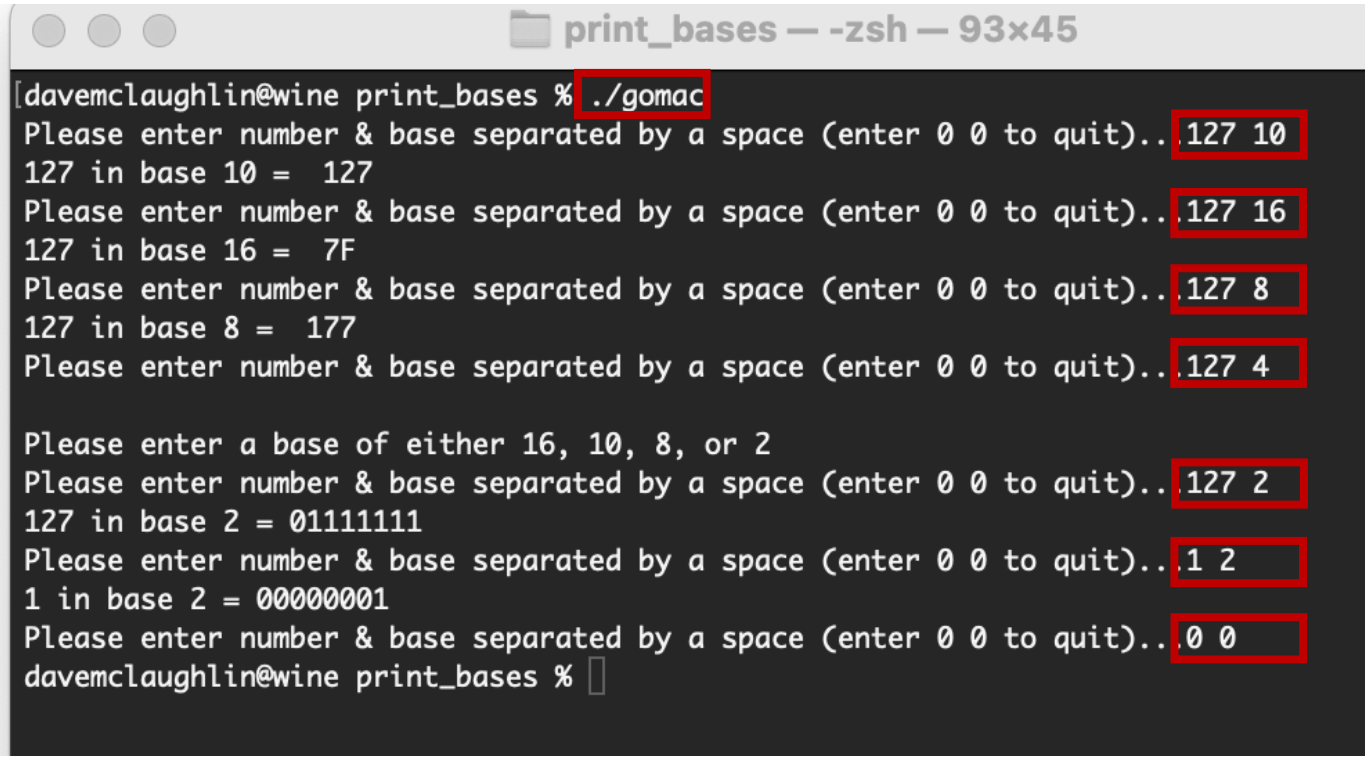
ECE-231 Introduction to Embedded Systems Spring 2022
Lab Assignment #1
Due: 11:59 pm Sunday 2/13/22

Write a program to convert & print a user-input decimal number into its corresponding value in a user-specified base.

The program shall meet the following specifications:

1. Get two numbers from the user, a decimal value and a base.
1.1 The decimal value shall be in the range 1 to 255
1.2 The allowable bases are 16, 10, 8, and 2
2. Print the decimal value and its corresponding value in the specified base
3. Print a message to the user if they specify a base other one of the allowable bases
4. Use a user-defined function to convert and print the user's decimal value to base 2
4.1 Use of the C function itoa(), which converts an int to a string in different bases, is not allowed. The intent of this assignment is for you to implement the conversion using an algorithm that uses repeated integer division and modulo division.
5. Keep running until the user enters a value of 0

Example I/O: Keyboard entry by the user is shown with red box



Programming elements involved: printf, scanf, while(); for(); arrays; /, %, user-defined function
An algorithm for converting from base 10 to base 2 will be disussed in class.

Document History

Revised on	**Version**	**Author**	**Description**
1/30/22	1.0	D. McLaughlin	Initial document creation & release
1/31/22	1.1	D. McLaughlin	Added subrequirement 4.1