Introduction to Computer Science

Laboratory 3

November 1, 2024

1. Write a C program that asks the user for an integer value `n` and then prints the multiplication table for `n`.

   For example, for `n`= 3 the output should be:

   3 * 0 = 0
   3 * 1 = 3
   ...
   3 * 10 = 30

2. Write a C program that asks the user for an integer `n` and then prints all of the `n`'s digits. Utilize a do-while.

   Hint: utilize the modulo operation (%) to get the last digit of a number.

3. Write a C program that asks the user for a number `n` and then prints the first `n` even numbers.

4. Write a C program that asks the user for an integer `n` and then prints the factorial of `n`.

5. Write a C program that uses the `rand` function to generate a random number `r` (from 0 to 100). Then the program should ask the user to enter numbers until it guess `r`, for each attempt the program should tell is that attempt is greater or lower than `r`.

6. Modify the last C program to limit the number of guessing attempts to 5.

7. Write a C program that asks the user for an integer number `n` and prints the n^{th} number of the Fibonacci sequence.

   For example for `n`= 6 the output should be:

   0,1,1,2,3,5,8