

This assignment covers all chapters up to and including 5 only.

Filename: Strings.asm

Description: Write a program that uses procedures (specifically the two procedures as described below), so that the input from the user determines how many times to generate random strings. Do not generate 1 string and repetitively display it. Each string generated will be unique.

1. Create a procedure (EnterInt) that asks for an **unsigned integer** input (N) from a user. The procedure must pass this integer back to the calling procedure as an argument (i.e. in a register).

2. Create a procedure (RStr) that generates a string of length L, where L is between 7 and 32, containing random **CAPITAL** letters. When calling the RStr procedure, pass the value of N (from EnterInt) in ECX, and pass the offset to an array of bytes in EDI. This array will hold the randomly generated string. You may declare an array of the maximum size since you don't know what the random string length will be. Use indexed addressing to move through your array.

Use the Irvine library to

- a) Print each randomly generated string.
- b) To require a key press before exiting the program.
- c) Set the seed for random number generation.
- d) Generate a random unsigned integer in the required range.

Specifications:

- 1. All data from the user will be saved into an appropriately sized and declared variable.
- 2. The output will be shown in the console window with one string per line.
- 3. The string will only have Capital letters.
- 4. You must use indexed addressing.
- 5. You must have at least 2 procedures; each with a proper description.
- 6. None of the actual work for this assignment will be in main PROC. Only calls to appropriate procedures. It may be necessary to mov data into registers for each call, but this should be minimal.

7. You may use any command Chapter 5 and below. **Commands from Chapters not yet covered in class will result in a reduction of 50% in your grade.**
8. Your procedures must be called from main proc.
9. Data local to a procedure must be declared in that procedure, i.e. prompts. When using local data, you must have a *.data* and a *.code* in your procedure.
10. Part of the program will be graded on the basis of program style. I reserve the right to judge style as I deem fit for the assignment. The use of comments is required and not optional.
11. At this time, do not use any of the text box procedures from the Irvine Library.
12. Upload to Canvas prior to the due date.

Extra Credit (5 pts): Create a procedure (extracredit) which prints each string in a random foreground color (exclude black on black). The extra credit must meet all specifications as stated above. You may choose to write another procedure to determine the foreground color.

Note: If you choose to complete the extra credit, it MUST be submitted as a separate file AND you must also submit the assignment as stated above.

If you do the extra credit you must submit TWO files. One for the assignment and one for the extra credit.