

National Sun Yat-Sen University
ASSEMBLY LANGUAGE AND MICROCOMPUTER
Program #1
Due 11:59 PM Nov 17 2025

<Programming Problem I> Write an ARM assembly program that reads an input string from the command line, converts all alphabetic characters to lowercase, and removes all non-alphabetic characters from the string. The processed result should then be displayed on the screen.

Example:

When the program is executed as follows:

arm-none-eabi-run prog1 “Tom’s brother Timmy is 6 years old.”

The program should display:

prog1 result: tomsbrothertimmyisyearsold

You may use the ***printf()*** function to display the result; however, you are not allowed to use the ***scanf()*** function.

Note:

- (a) Your assembly code should follow the APCS rules described in the textbook.
- (b) The submission of your homework should follow the method announced by TA before the deadline. Homework submitted after the deadline will not receive any score.