National University of Computer and Emerging Sciences

Laboratory Manual

for

Computer Organization and Assembly Language Programming

(EL 213)

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Section	H
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Objectives

After performing this lab, students shall be able to:

- ✓ Display Memory
- ✓ Hooking
- ✓ Interrupts

Exercise 1: Write a TSR to rotate the screen (scroll up and copy the old topmost line to the bottom) while F10 is pressed. The screen will keep rotating while F10 is pressed at 18.2 rows per second. As soon as F10 is released the rotation should stop and the original screen restored. A secondary buffer of only 160 bytes (one line of screen) can be used.

Exercise 2: Write a keyboard interrupt handler that disables the timer interrupt (no timer interrupt should come) while Q is pressed. It should be re-enabled as soon as Q is released. Hook timer to print timer ticks on screen and verify both functionalities.

Exercise 3: Write a TSR to make asterisks travel the border of the screen, from upper left to upper right to lower right to lower left and back to upper left indefinitely, making each movement after one tick. Note: Do not use any loop.