Wednesday	**Assignment-1**	Due on:
March 17, 2021	**EE 309: MicroProcessors**	March 24, 2021
	Spring Semester 2021	Before 23:50

Q–1 Illustrate by an example the difference between the instructions
lea ax, table[si]; and
mov ax, table[si];

Q–2 Consider the conditional jump statements for an 8086. Show that the logical combinations of flags used for conditional jumps related to signed comparisons do implement the desired conditions.

Q–3 Take the last two digits of your roll number. Replace any zeros with 9s in it. We want to use this decimal number as an example to show how decimal arithmetic is performed by 8086.

Write short code fragments to perform the following operations using this number as an example. Assume this number is stored in memory.

Report the expected result, the process used by 8086 to arrive at this result and the value of flags after the computation.

a) Subtract decimal 79 (stored as a packed decimal number in memory in a byte location next to the 2 digit number) from the 2 digit number.

b) Let the two digits be stored in successive byte locations in memory as **unpacked** decimal digits. Multiply the two digits to get the decimal result and store it in successive bytes in memory.

c) Divide the 2 digits stored in memory at successive byte locations as unpacked decimal digits by 7 and store the quotient and remainder at the same locations (overwriting the digits).

Q–4 We have an array of functions identified by their index. Write a code fragment for calling a function whose index is in al register. (This is similar to calling a test or action routine in the key board example for 8051).

Assignment Ends

Your submission should have an asm file with code and a pdf file for text answers.