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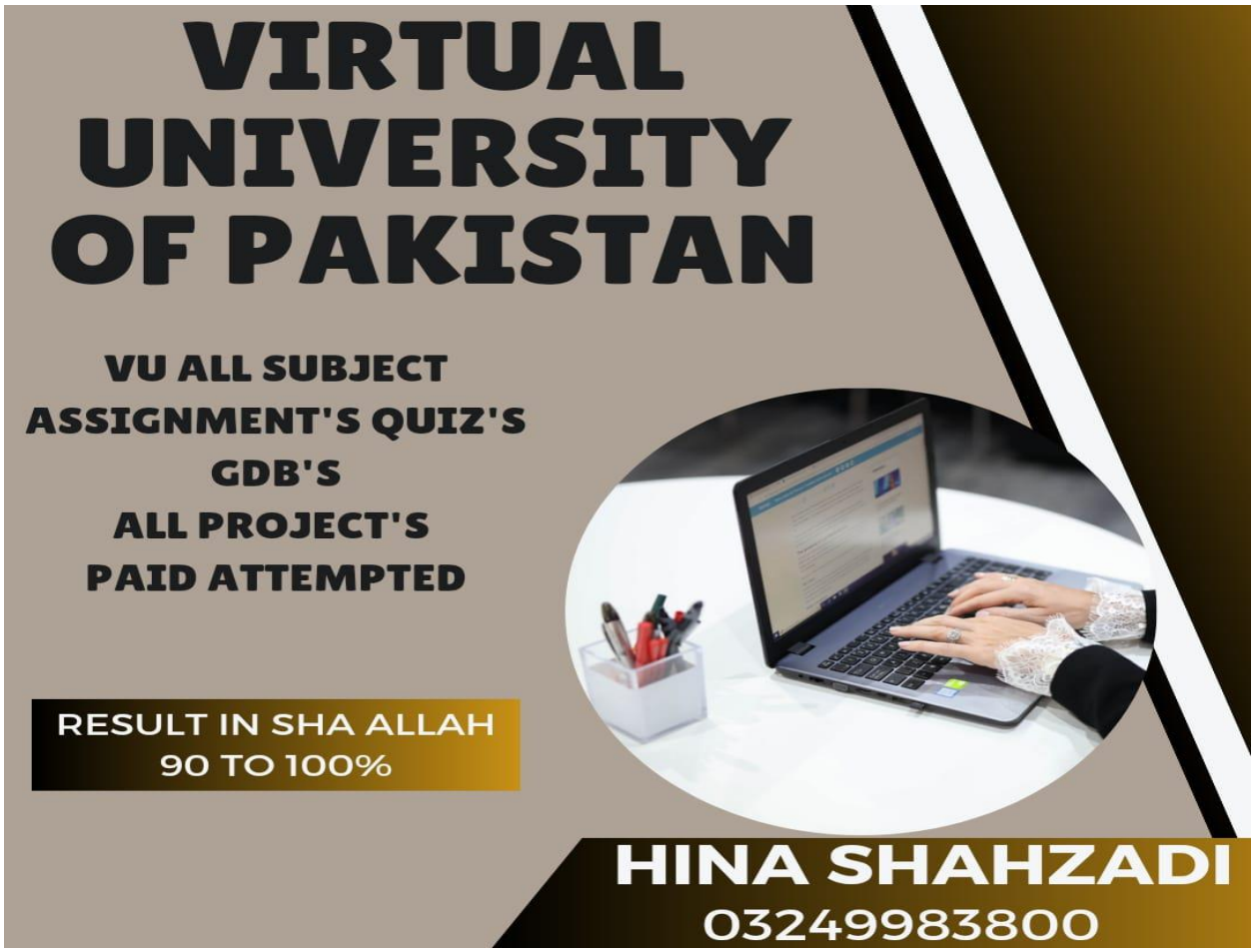
Current Paper CS401P Final Term



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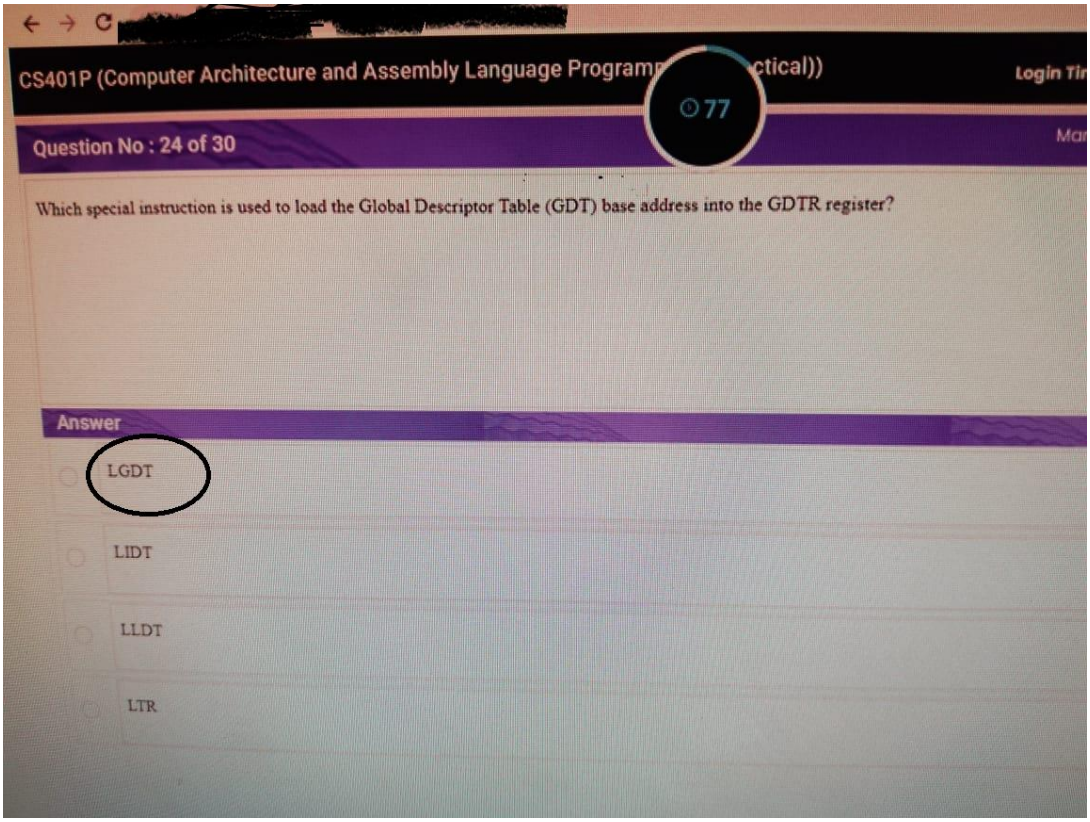

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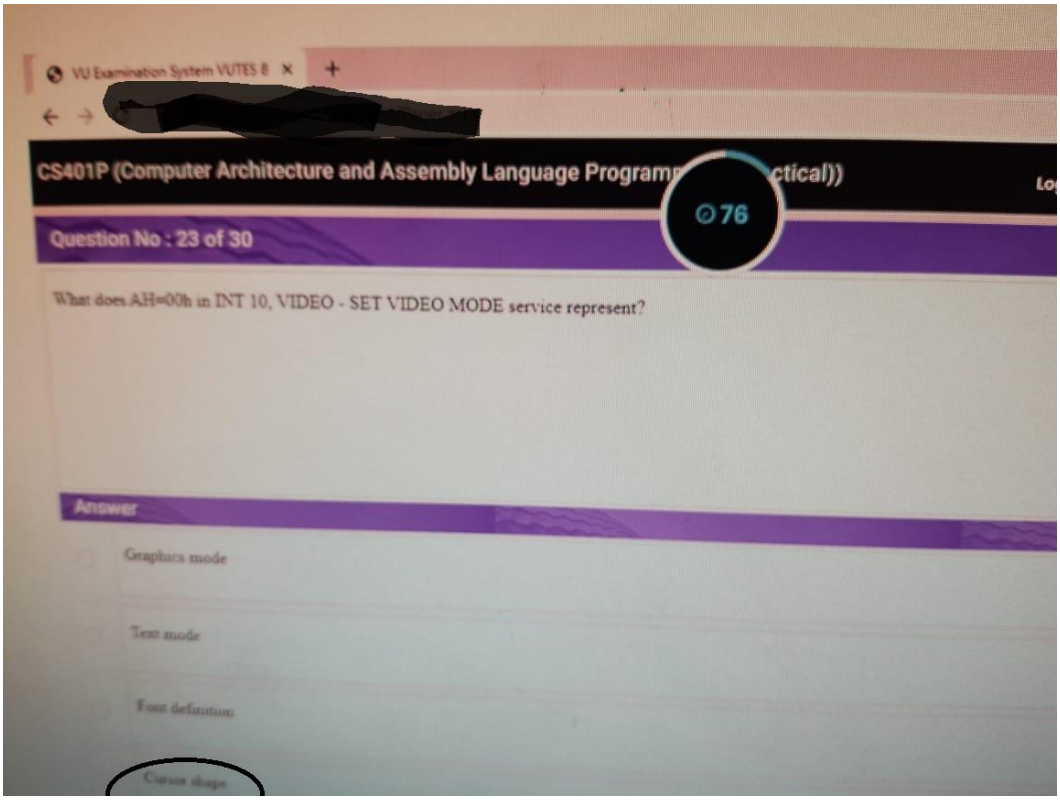

INT 10 - VIDEO - SET TEXT-MODE CURSOR SHAPE

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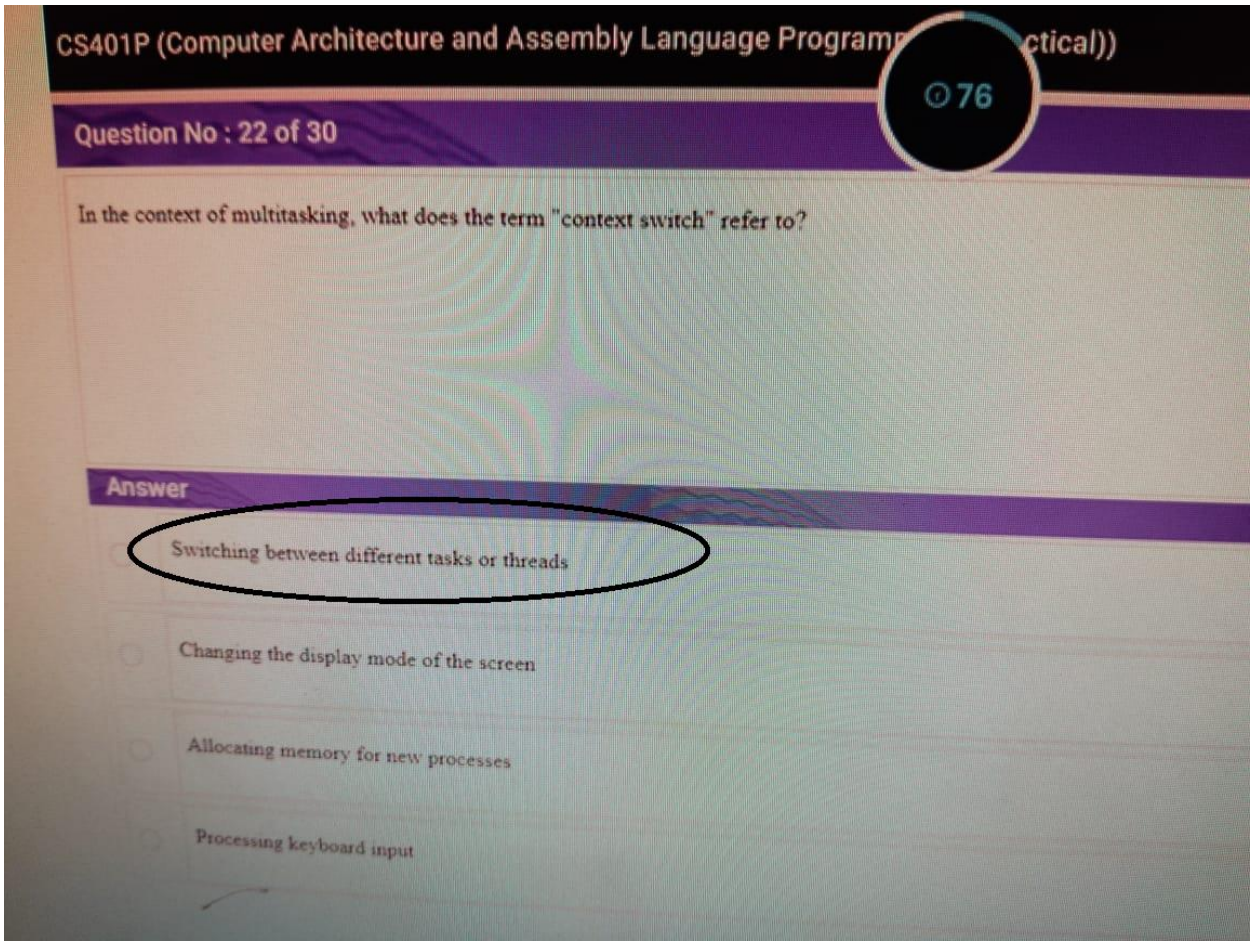

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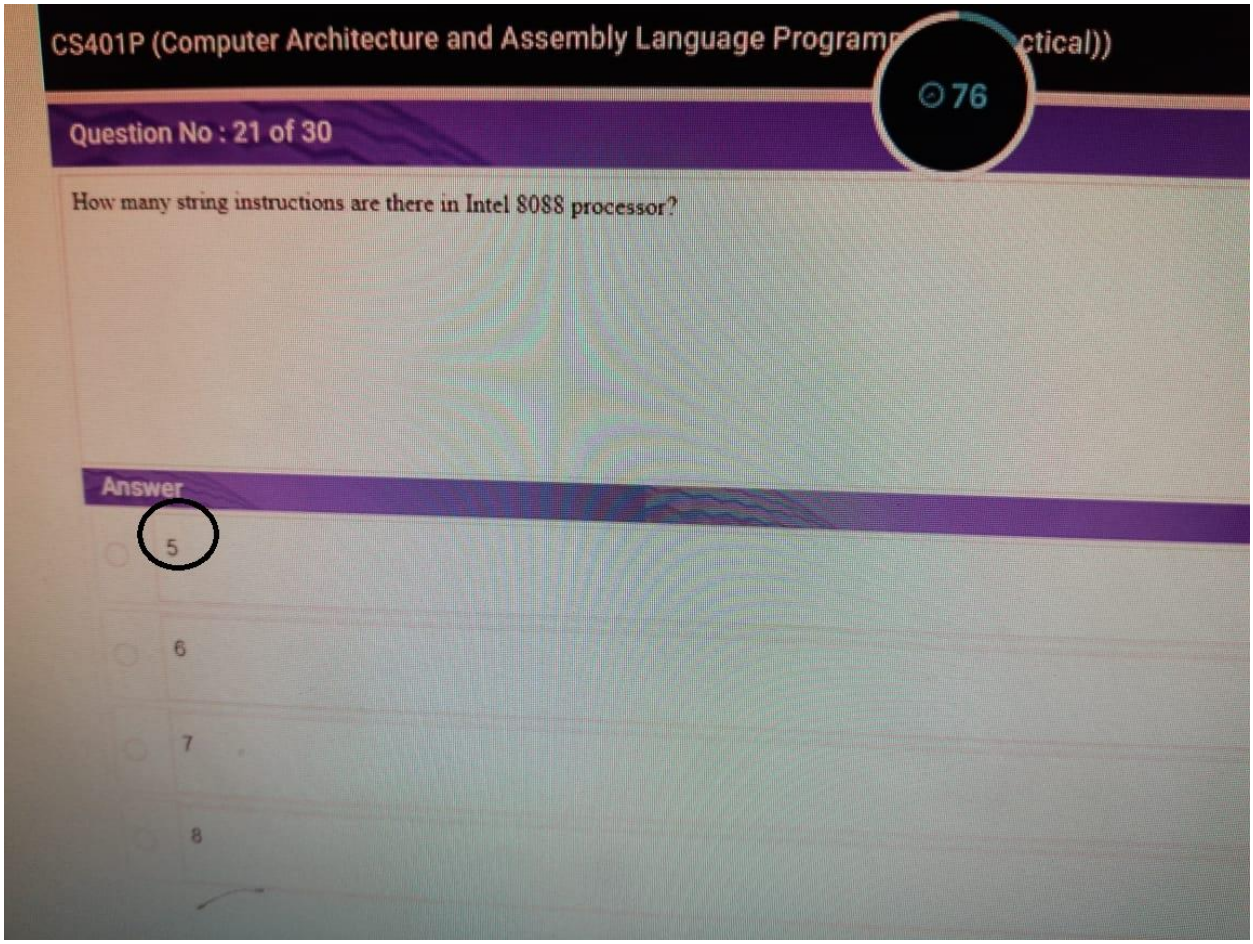

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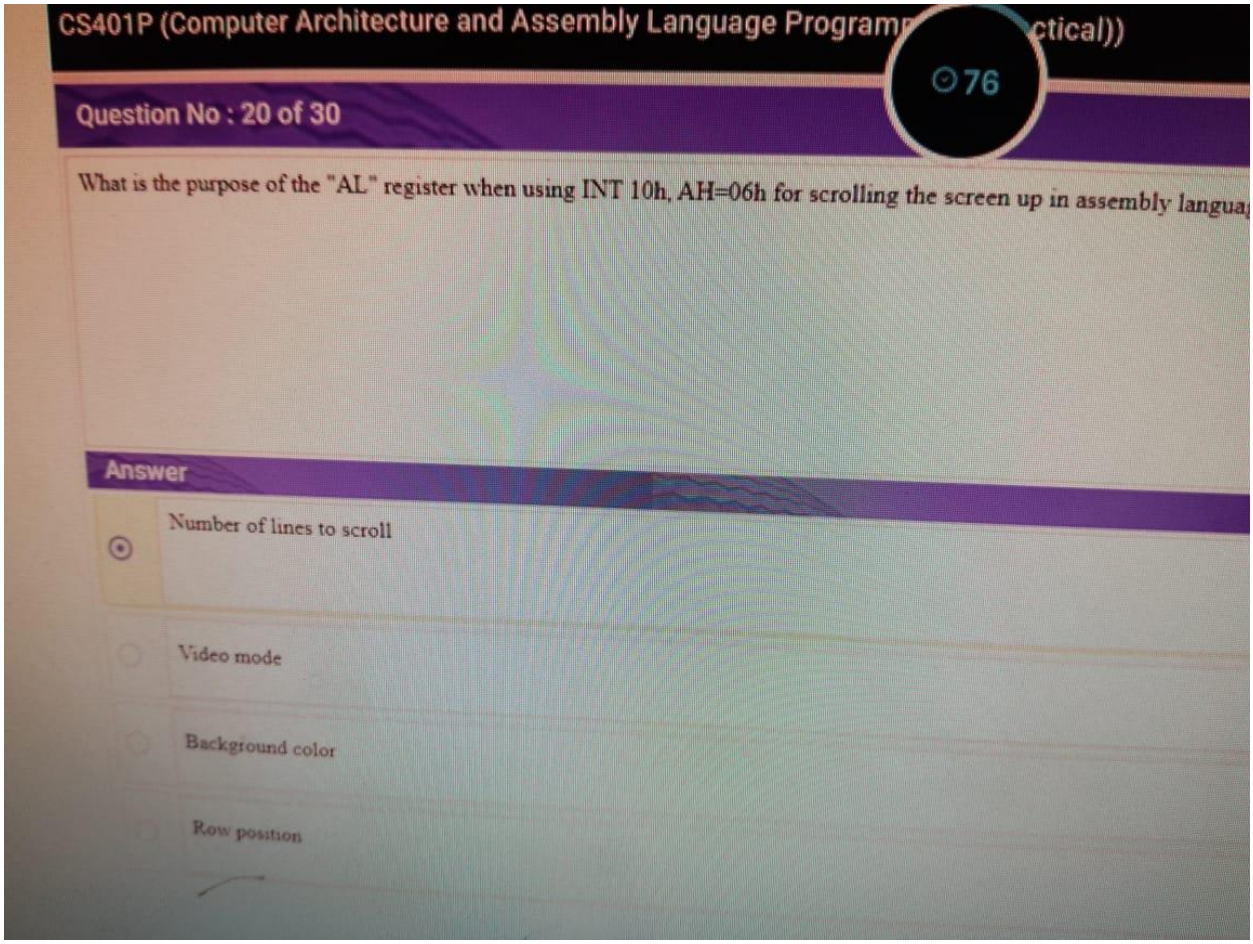

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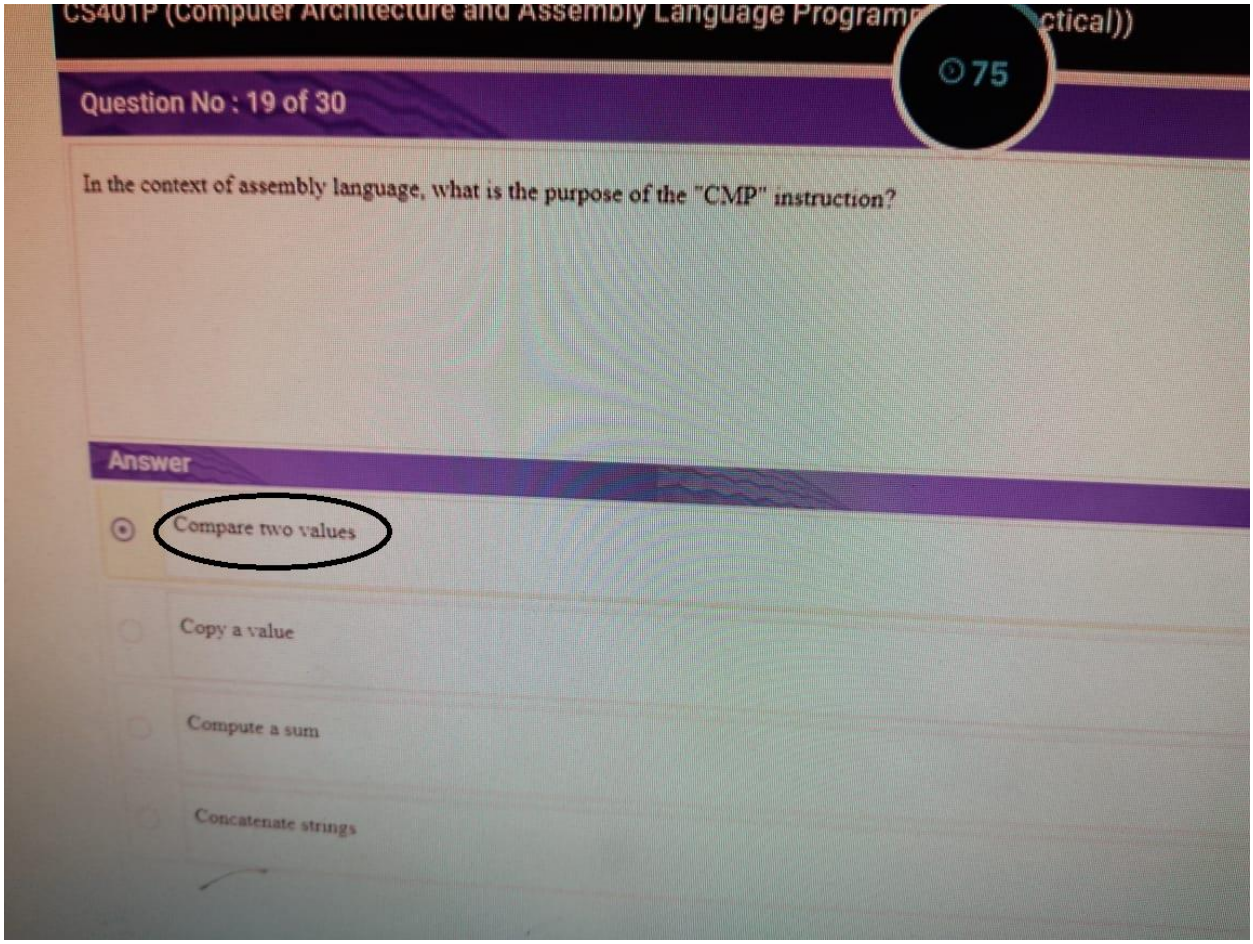

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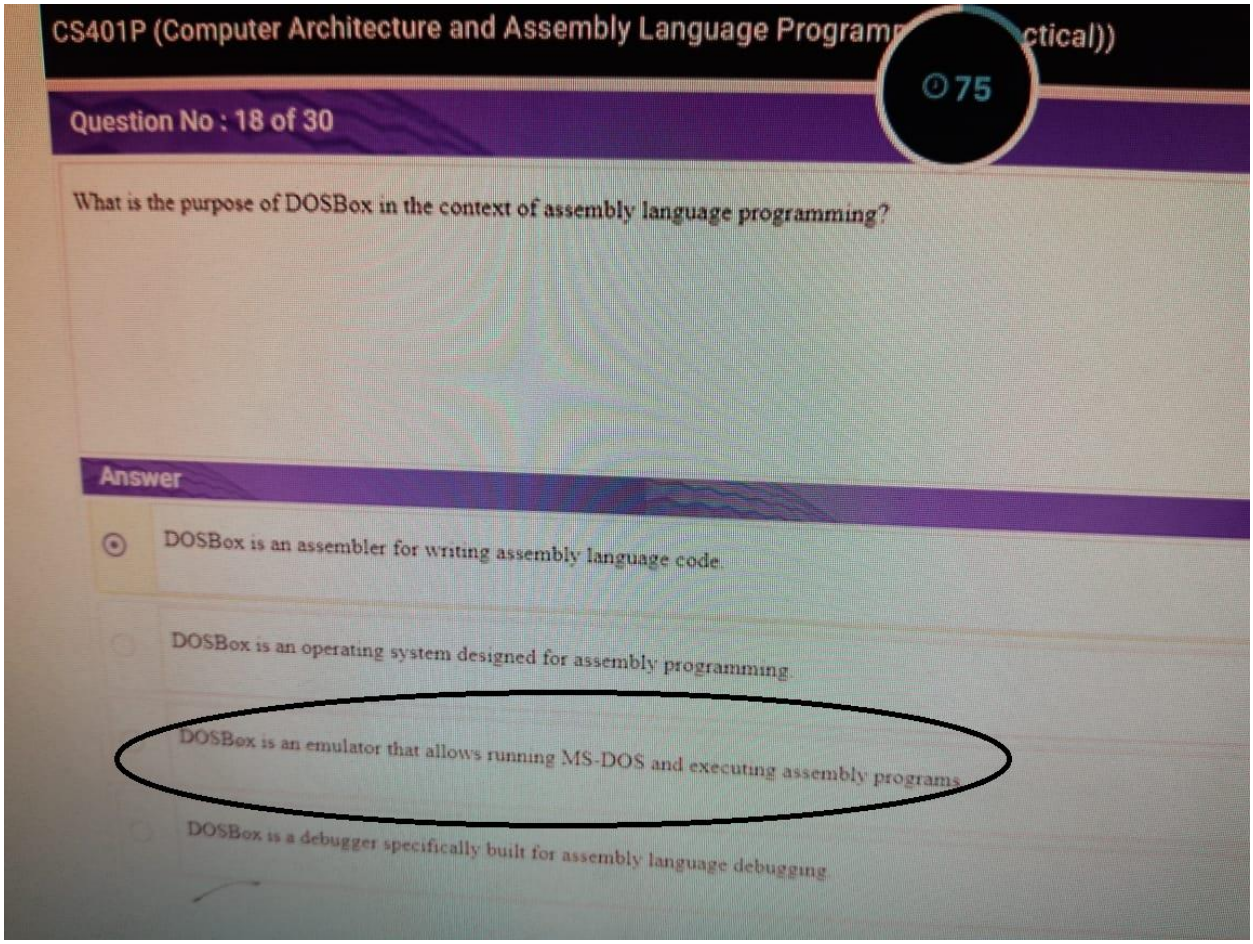

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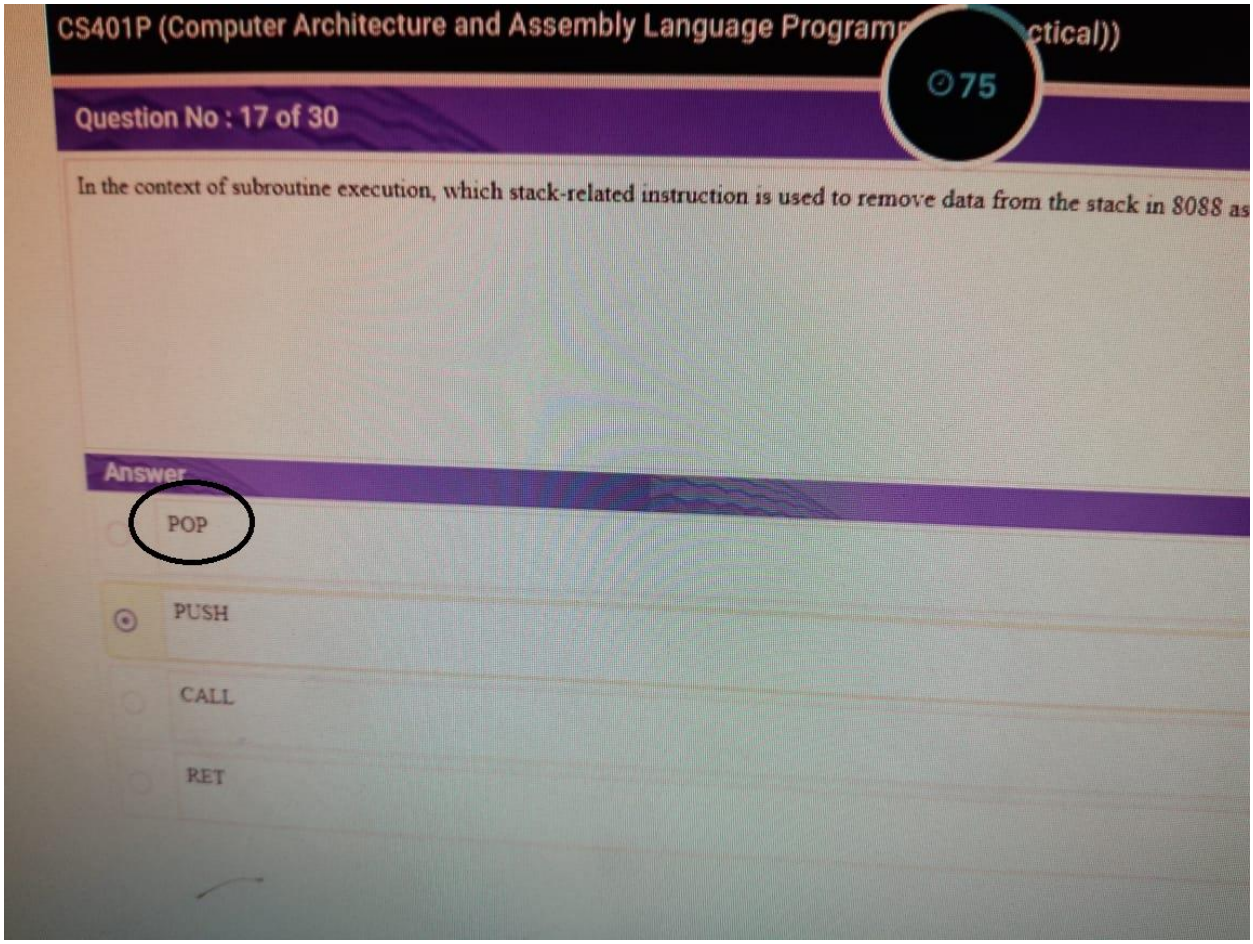

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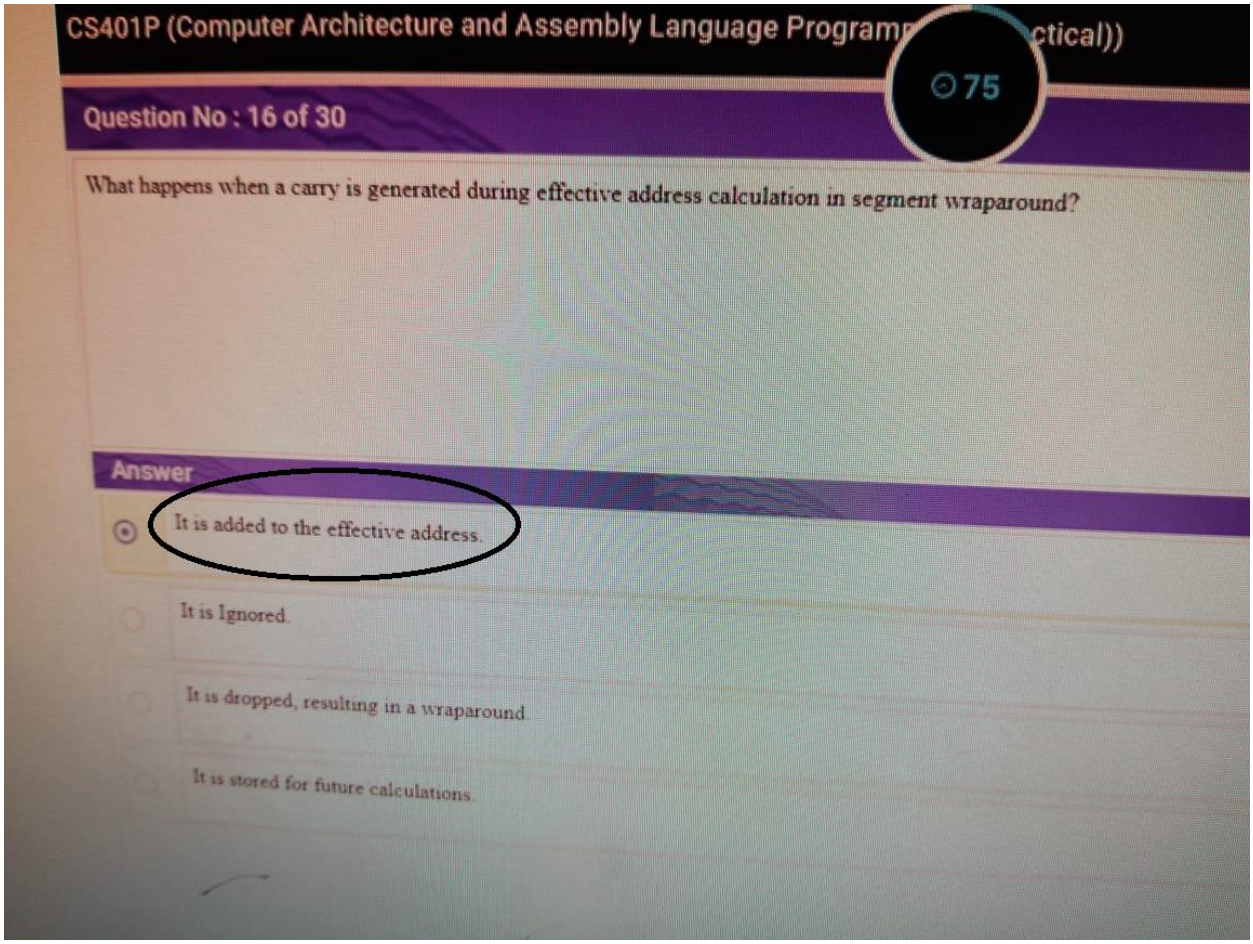

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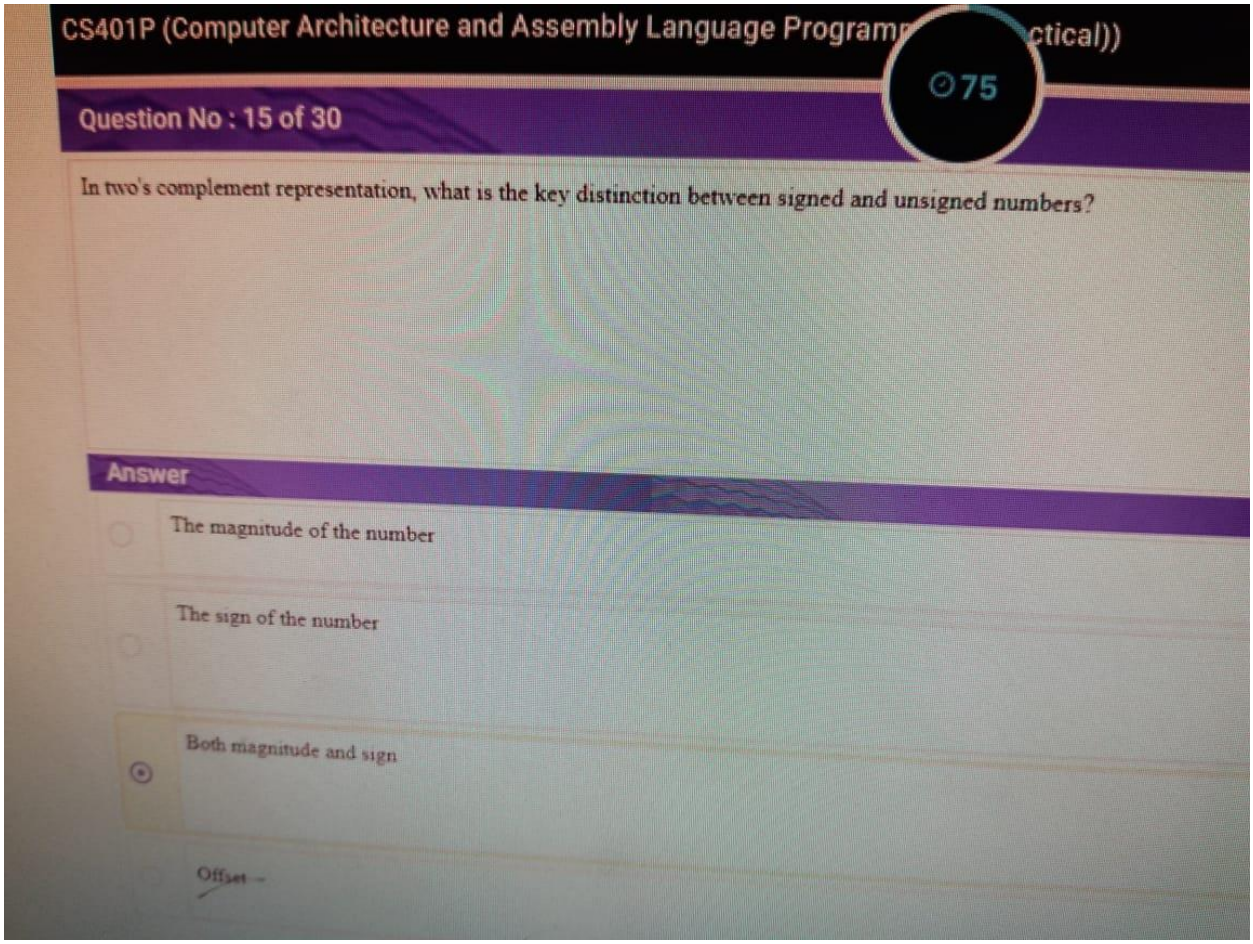

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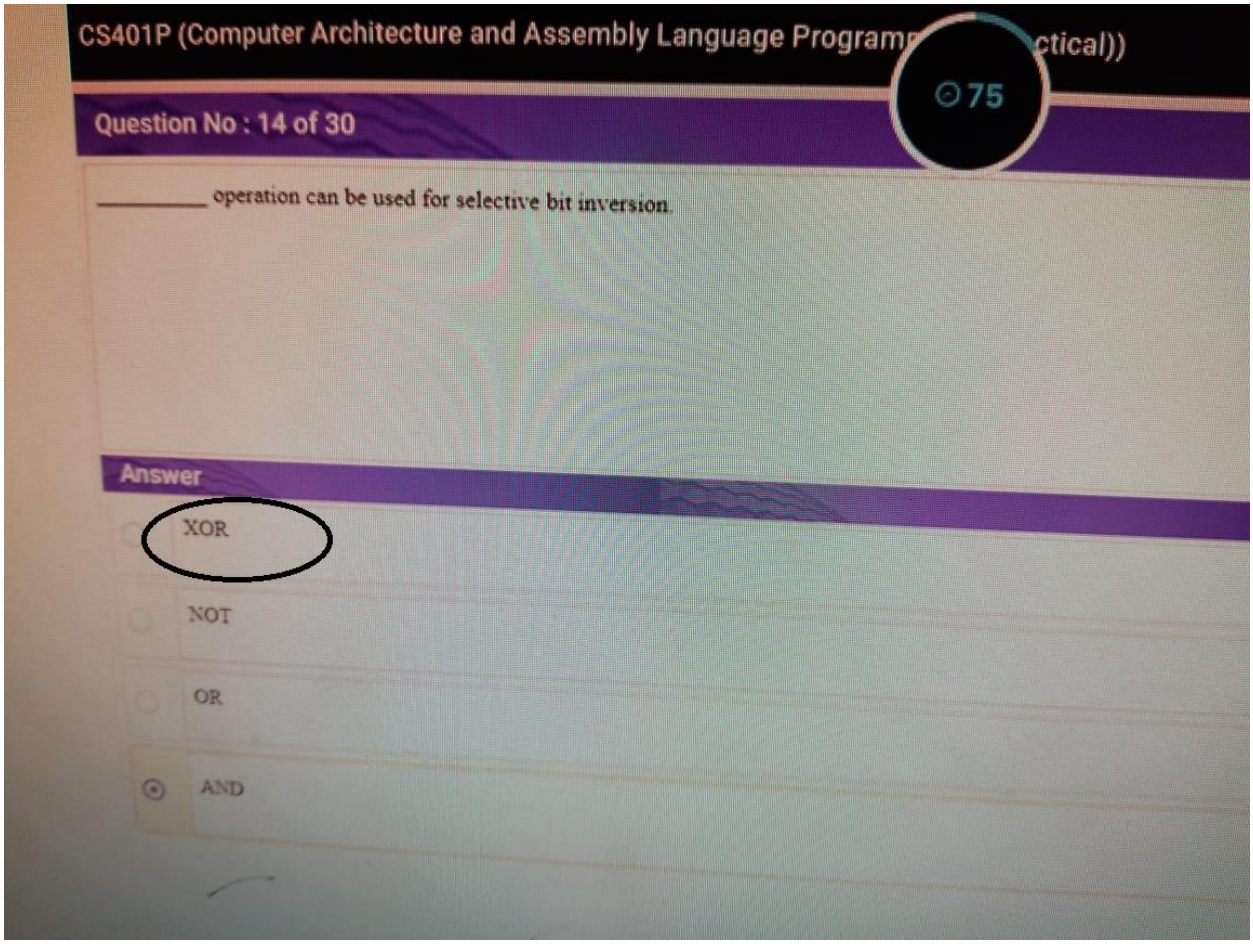

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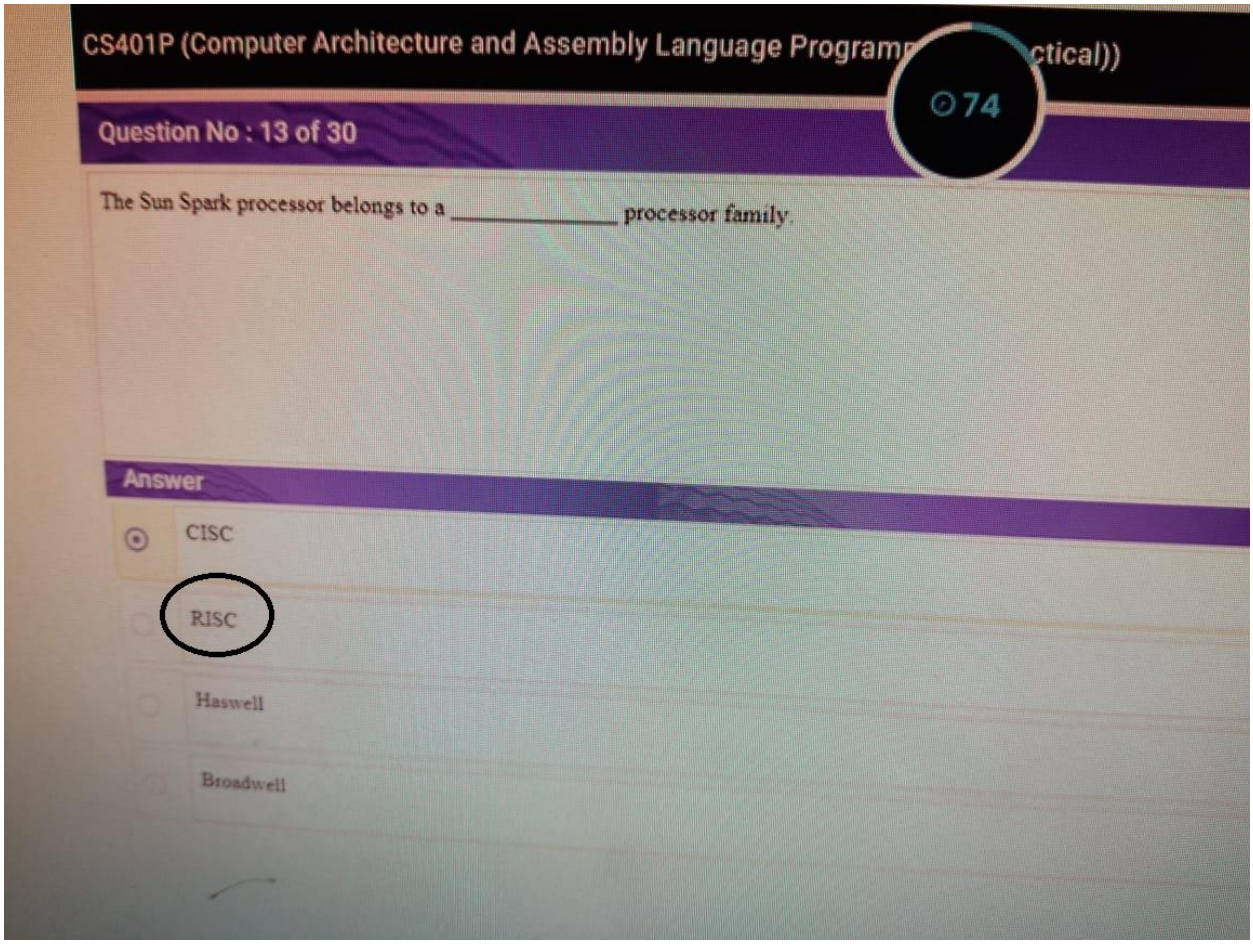

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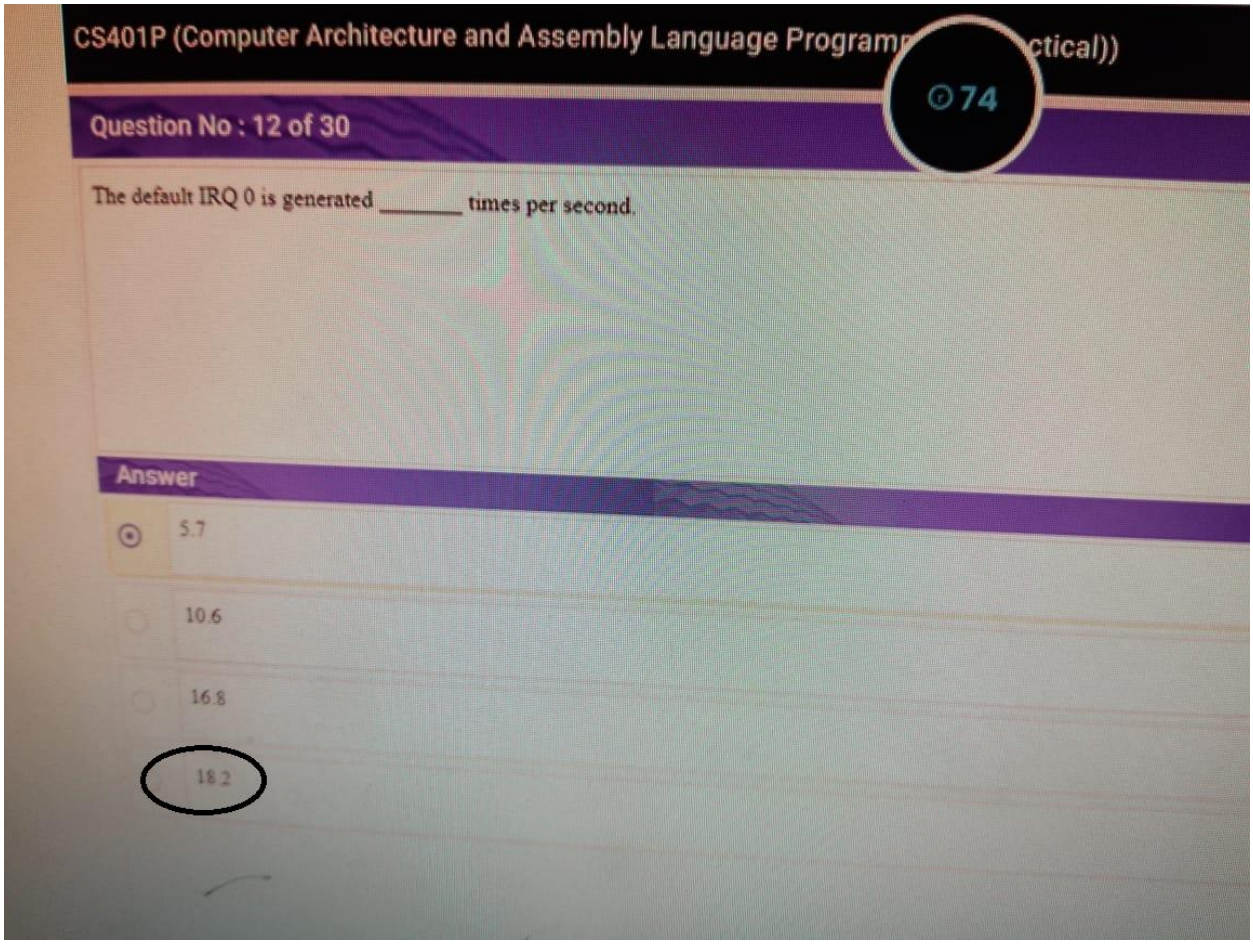

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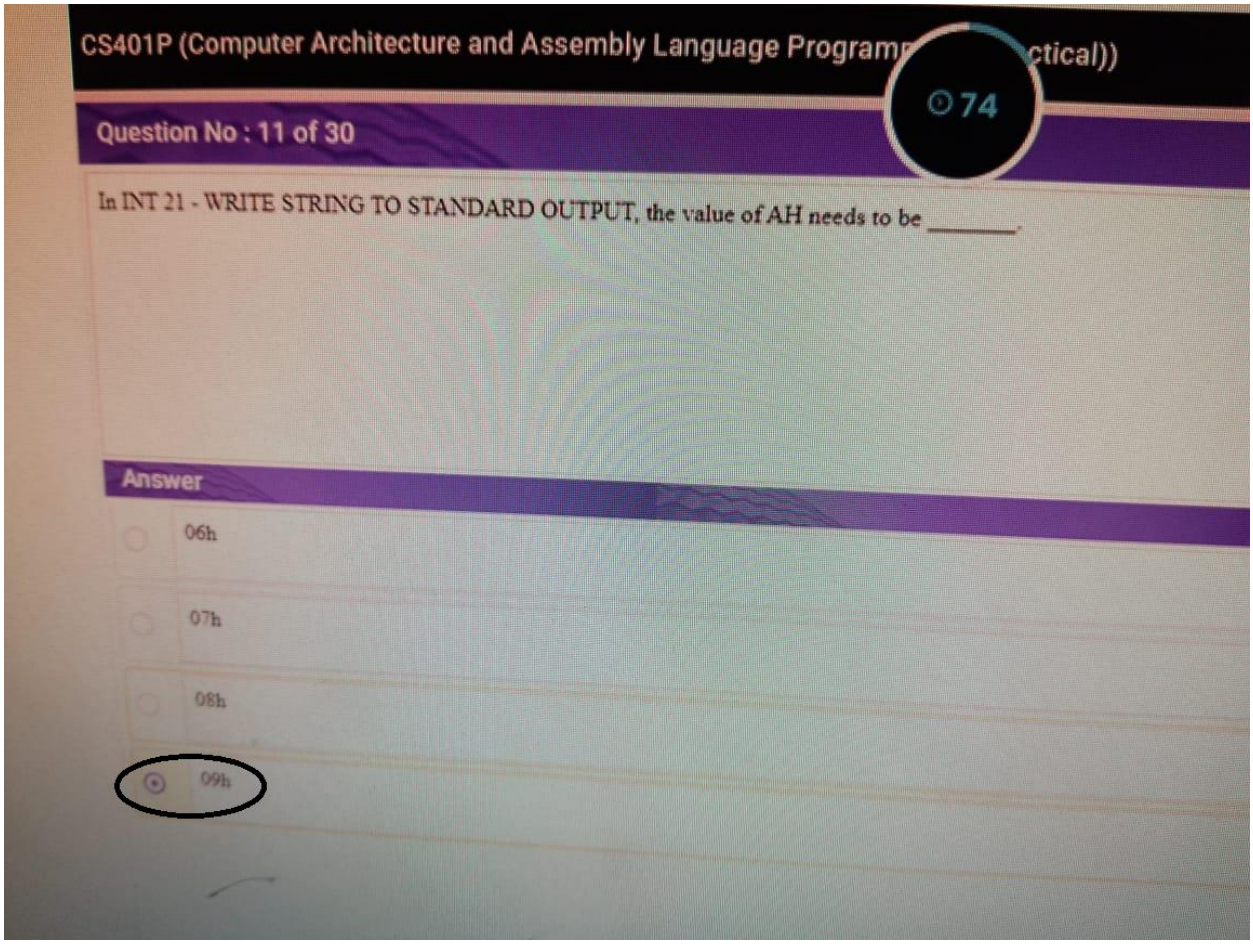

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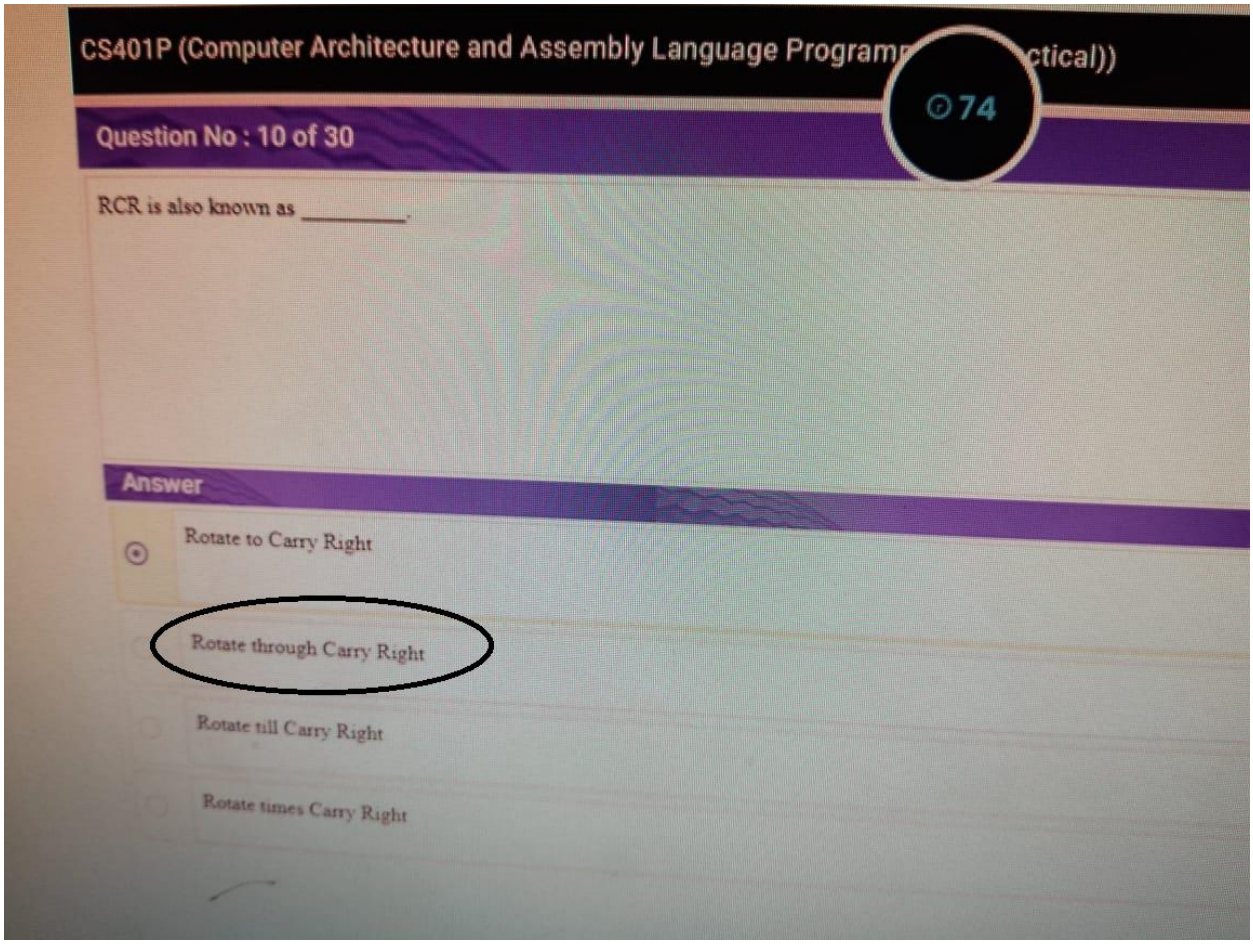

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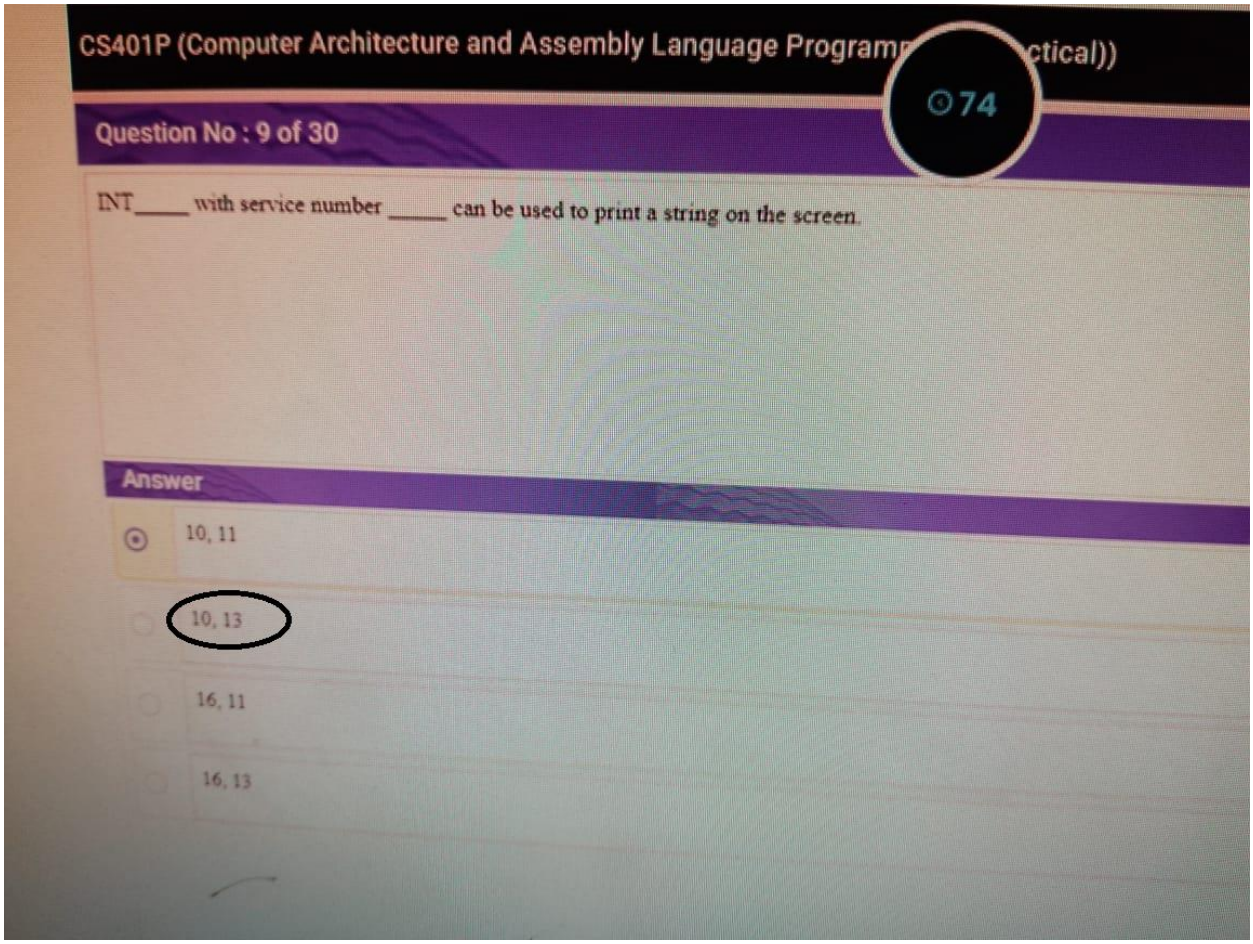

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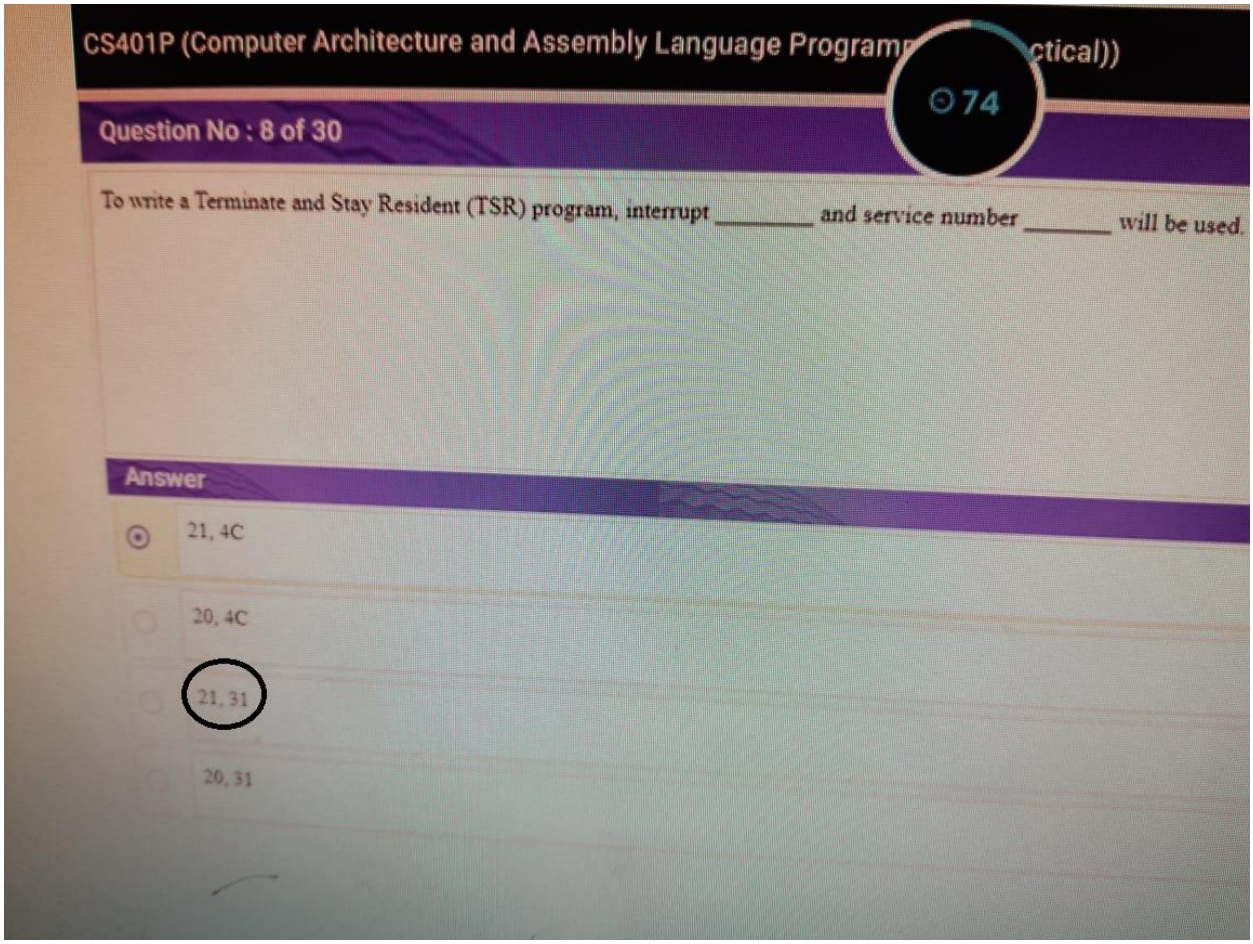

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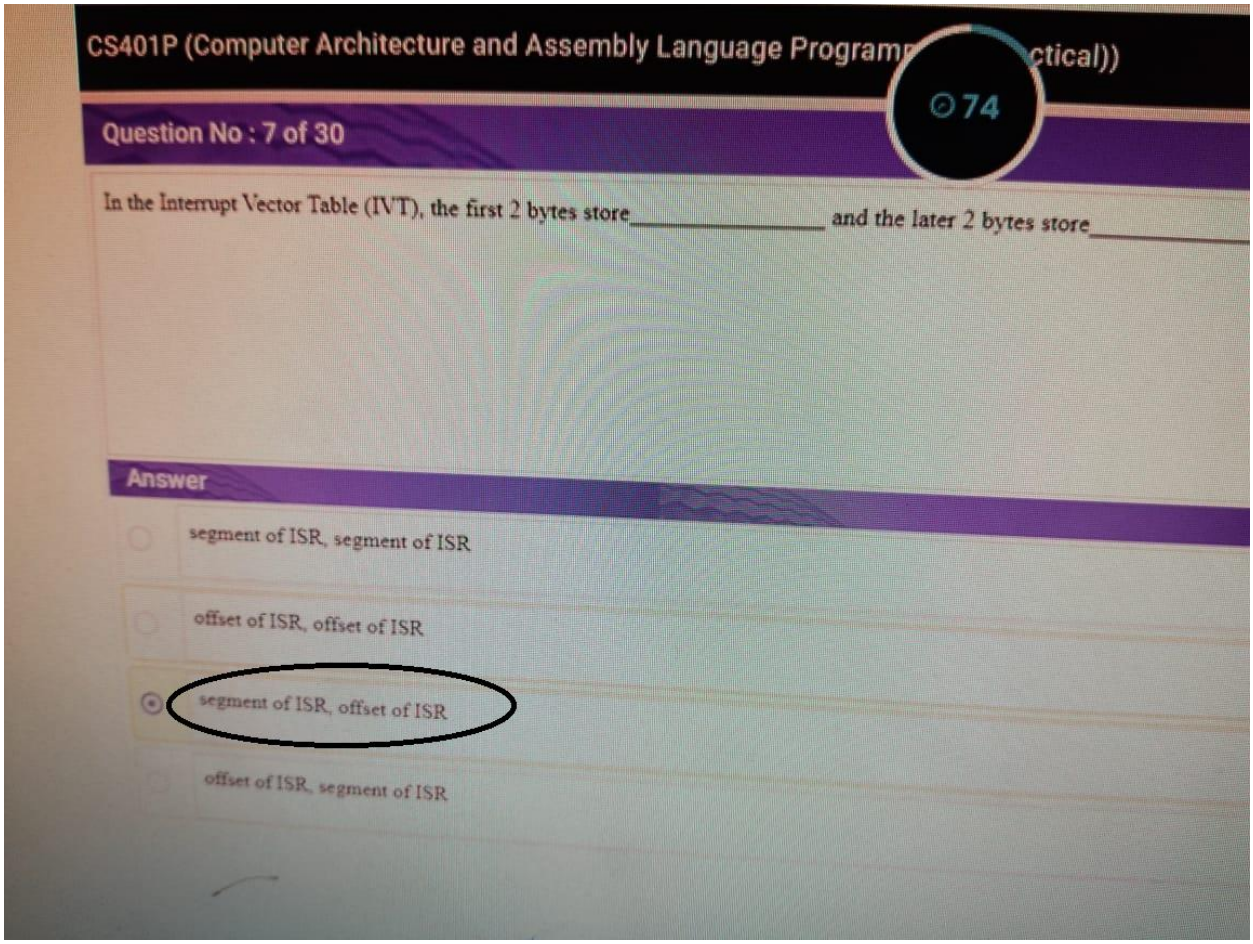

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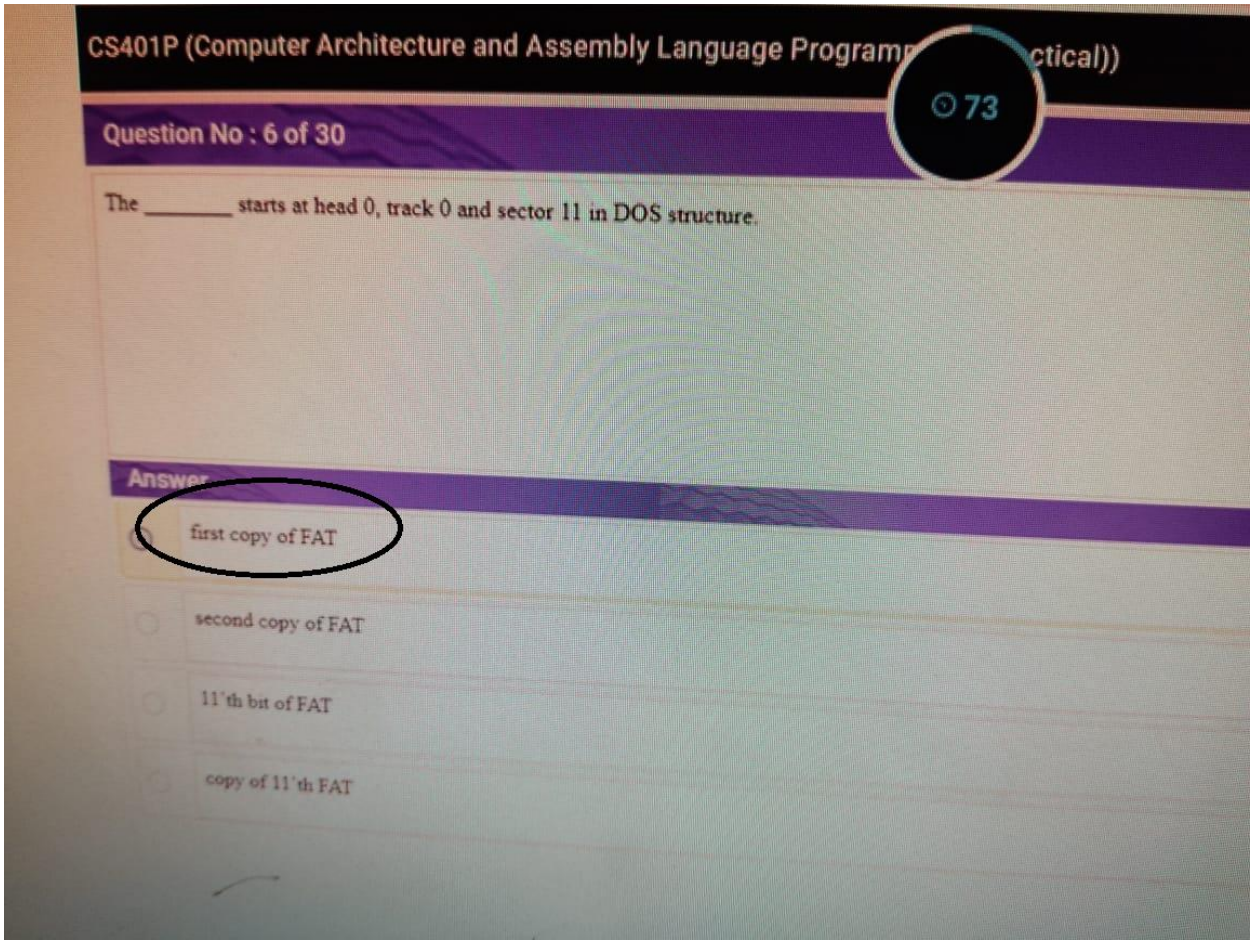

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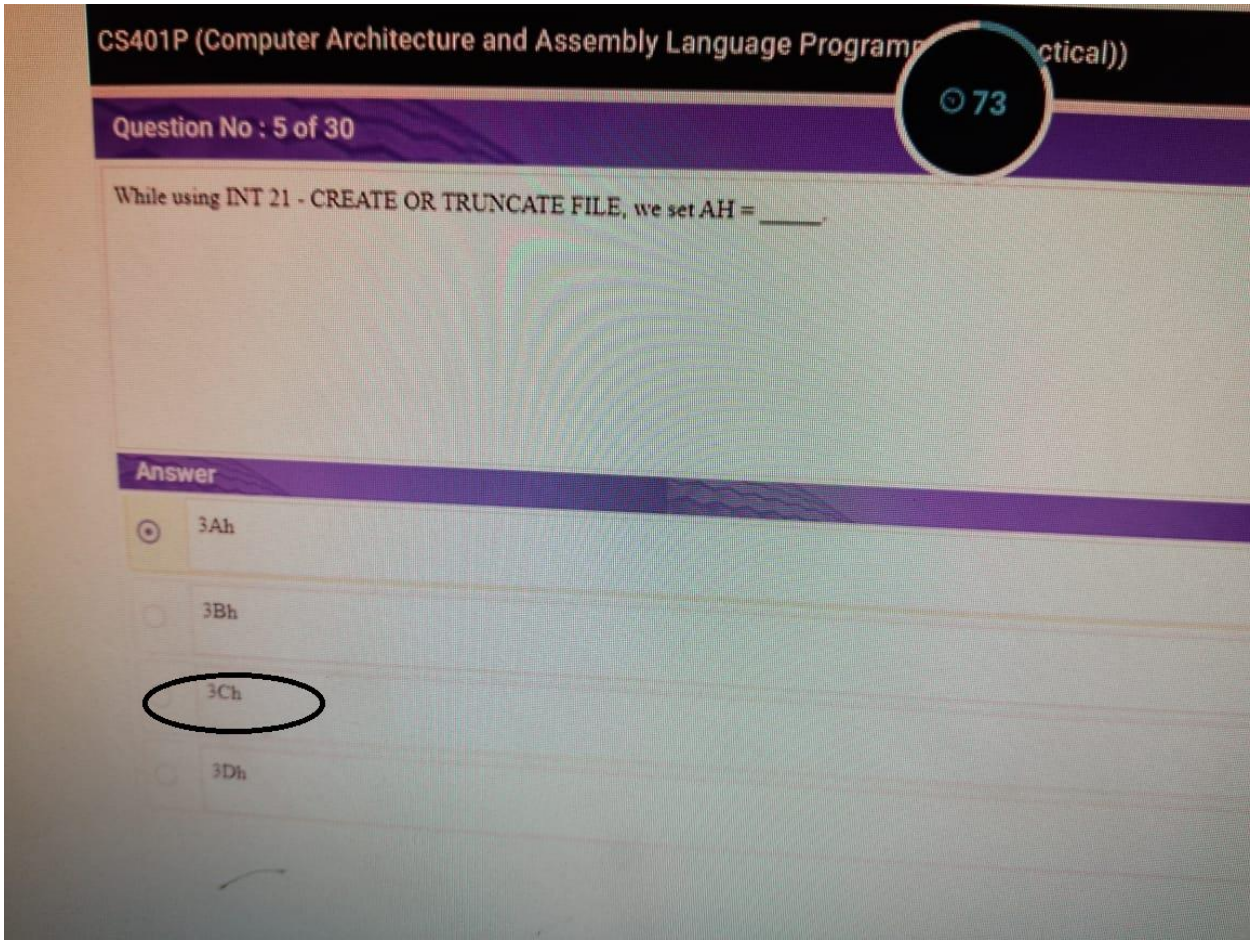

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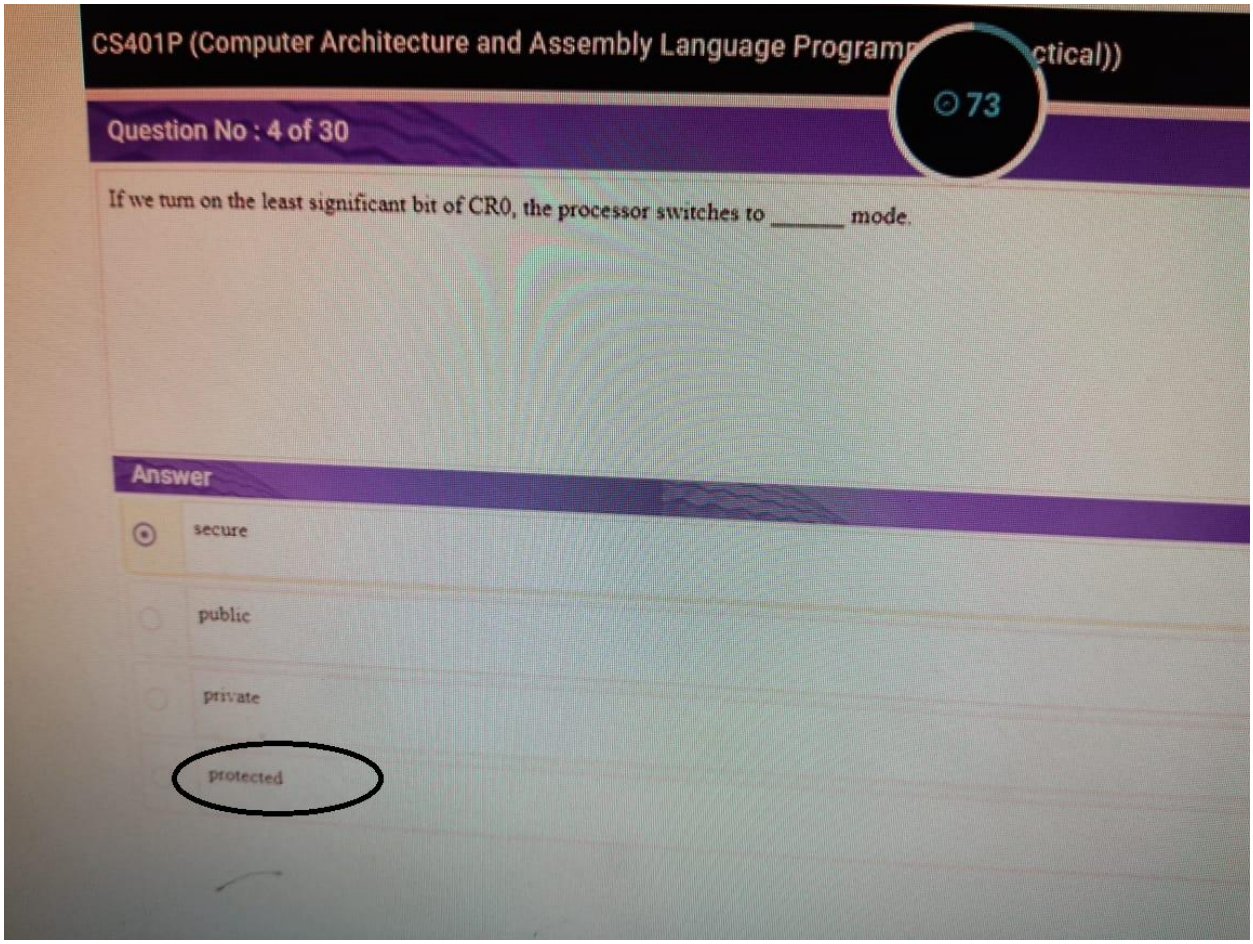

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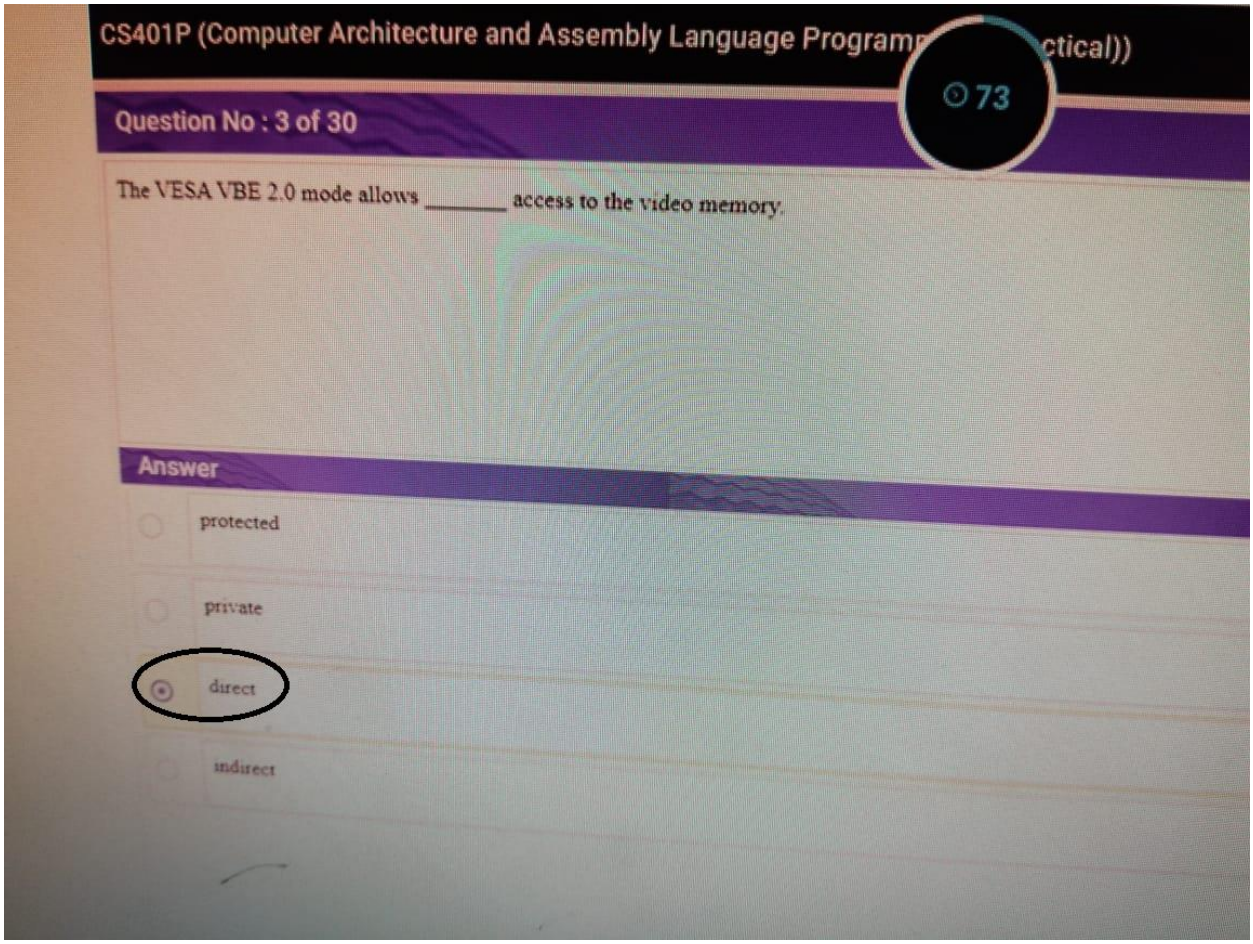

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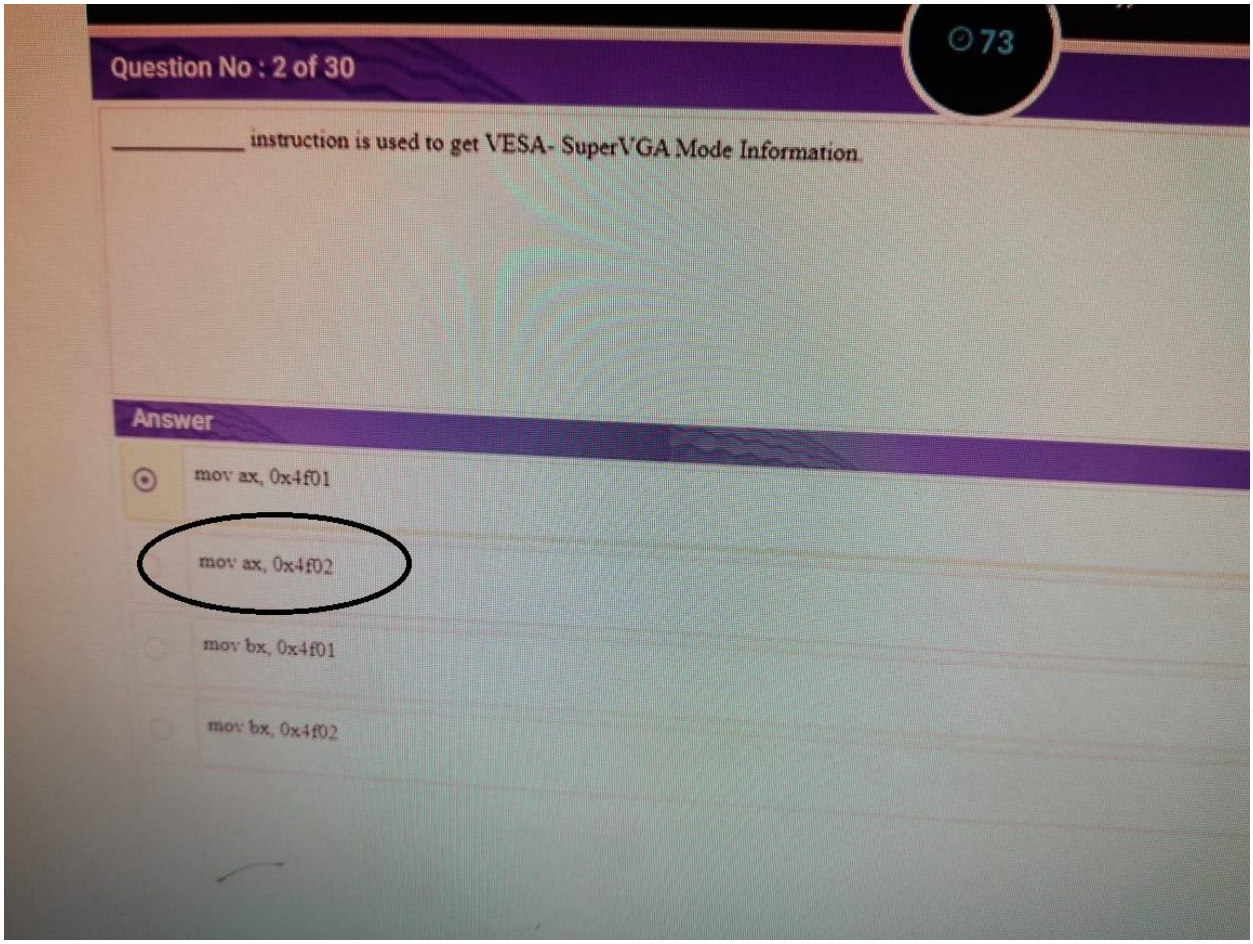

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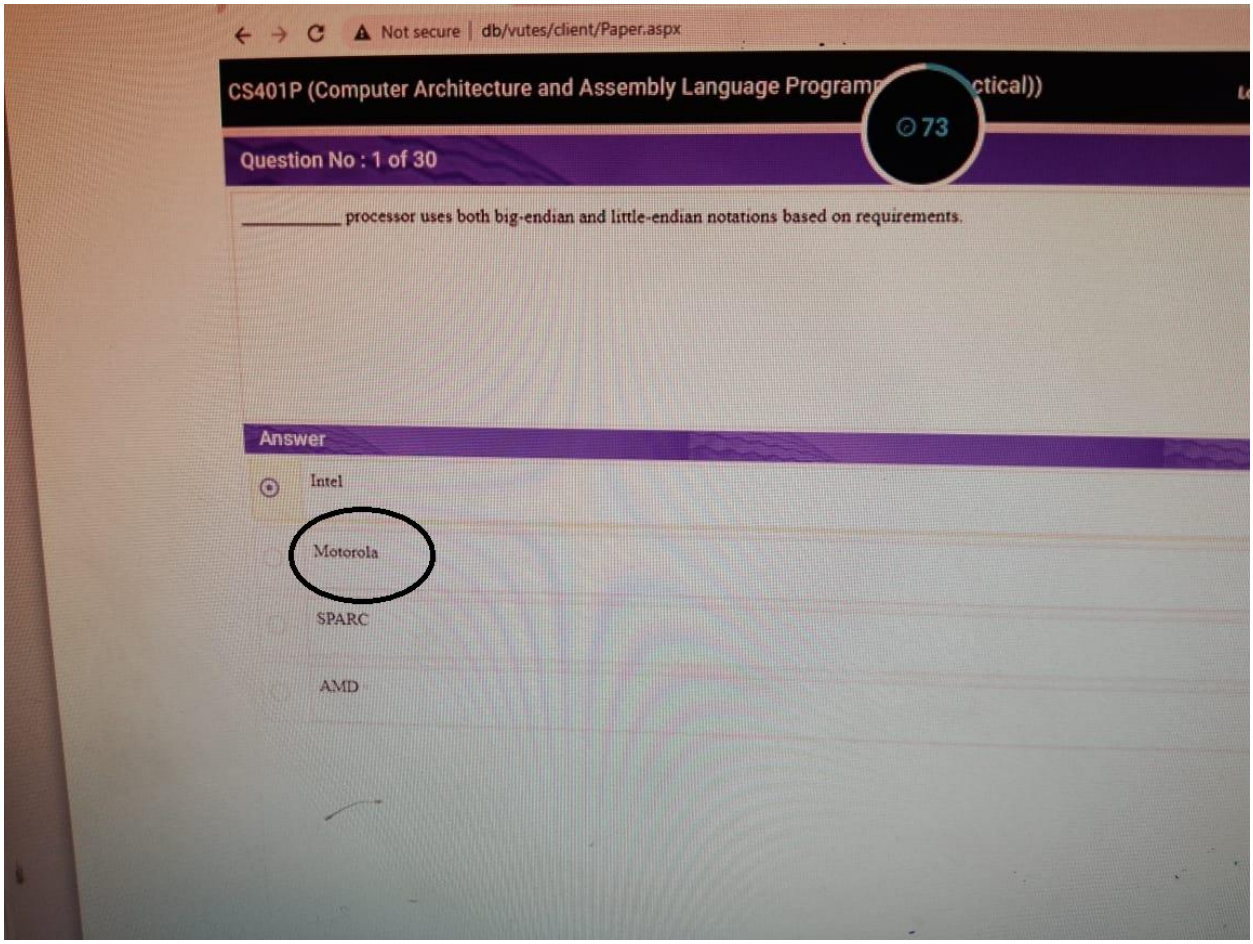

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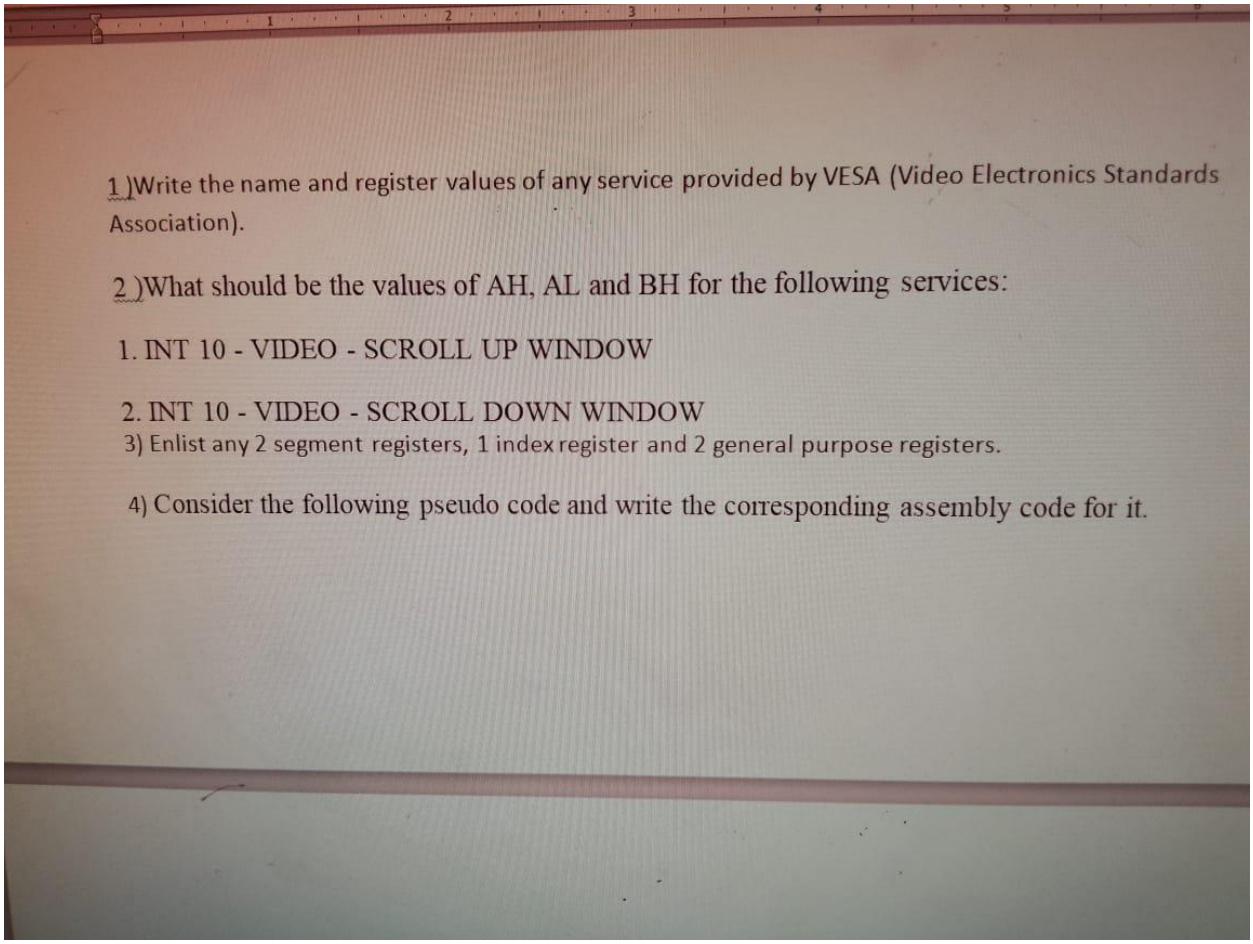

1)Write the name and register values of any service provided by VESA (Video Electronics Standards Association).

2)What should be the values of AH, AL and BH for the following services:

1. INT 10 - VIDEO - SCROLL UP WINDOW

2. INT 10 - VIDEO - SCROLL DOWN WINDOW

3) Enlist any 2 segment registers, 1 index register and 2 general purpose registers.

4) Consider the following pseudo code and write the corresponding assembly code for it.

Q :1

```
INT 10 - VESA - Get  SuperVGA Infromation
AX = 4F00h
ES:DI -> buffer for SuperVGA information
Return:
AL = 4Fh if function supported
AH = status
INT 10 - VESA - Get SuperVGA Mode Information
AX = 4F01h
CX = SuperVGA video mode
ES:DI -> 256-byte buffer for mode information
Return:
AL = 4Fh if function supported
AH = status
ES:DI filled if no error
INT 10 - VESA - Set VESA Video Mode
AX = 4F02h
```

Q 2:

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INT 10 - VIDEO - SCROLL UP WINDOW
AH = 06h
AL = number of lines by which to scroll up (00h = clear entire window)
BH = attribute used to write blank lines at bottom of window
CH, CL = row, column of window's upper left corner
DH, DL = row, column of window's lower right corner
INT 10 - VIDEO - SCROLL DOWN WINDOW
AH = 07h
AL = number of lines by which to scroll down (00h=clear entire window)
BH = attribute used to write blank lines at top of window
CH, CL = row, column of window's upper left corner
DH, DL = row, column of window's lower right corner

Q 3:

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Segment Registers:

1. CS (Code Segment)
2. DS (Data Segment)

Index Register:

1. SI (Source Index)

General Purpose Registers:

1. AX (Accumulator Register)
2. BX (Base Register)

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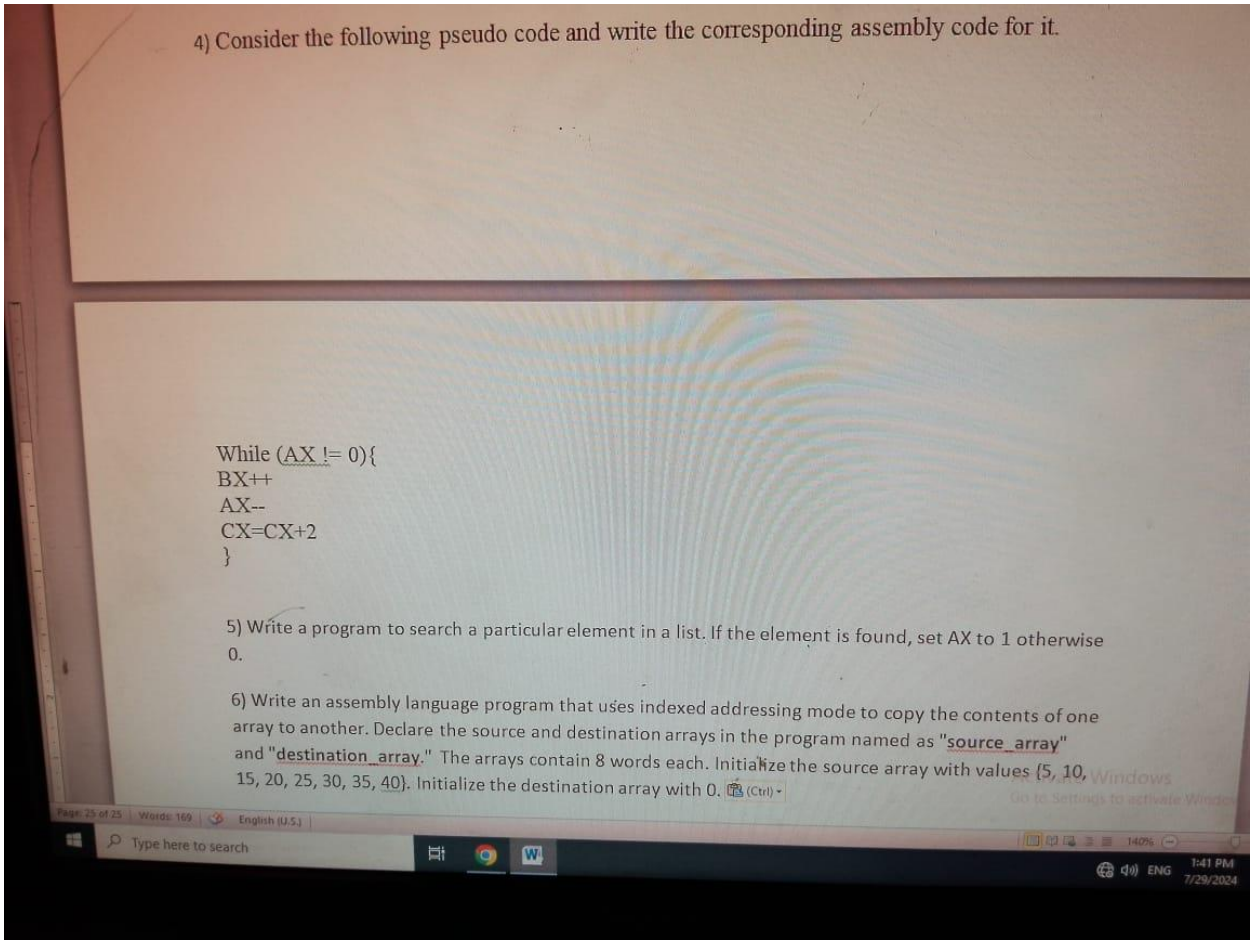

Q 4:

Assume AX, BX, and CX are already initialized

```
start_loop:
    cmp AX, 0        ; Compare AX with 0
    je end_loop      ; If AX is zero, jump to end_loop

    inc BX           ; Increment BX
    dec AX           ; Decrement AX
    add CX, 2        ; Add 2 to CX
```

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```
    jmp start_loop    ; Jump back to start_loop

end_loop:
    ; Loop ends here
```

Q 5:

```
section .data
list db 10, 20, 30, 40, 50  ; Define the list of elements
list_size equ 5             ; Define the size of the list
element_to_find db 30       ; Define the element to search for

section .bss
found resb 1                ; Define a variable to store the found flag

section .text
global _start

_start:
    mov cx, list_size       ; Set CX to the size of the list
    lea si, [list]          ; Load the address of the list into SI
    mov al, [element_to_find] ; Load the element to find into AL
    xor ax, ax              ; Clear AX, initially assume not found
    xor bx, bx              ; Clear BX, this will be our index

search_loop:
    cmp bx, cx              ; Compare index with list size
    je not_found
```

Q 6:

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```
section .data
source_array dw 5, 10, 15, 20, 25, 30, 35, 40  ; Define and initialize source array
destination_array dw 0, 0, 0, 0, 0, 0, 0, 0   ; Define and initialize destination array

section .bss
; No uninitialized data required for this program

section .text
global _start

_start:
   mov si, 0              ; Initialize SI to 0 (source index)
   mov di, 0              ; Initialize DI to 0 (destination index)
   mov cx, 8              ; Set CX to 8 (number of elements)

copy_loop:
   mov ax, [source_array + si]  ; Load word from source array into AX
   mov [destination_array + di], ax  ; Store word from AX to destination array

   add si, 2              ; Increment source index by 2 (word size)
   add di, 2              ; Increment destination index by 2 (word size)
   loop copy_loop         ; Decrement CX and repeat until CX is 0

end_program:
   ; Exit the program (for illustration, typically you'd do this via a system call)
   mov ah, 0x4c           ; DOS interrupt for program exit
   int 0x21               ; Call DOS interrupt
```