

CS401 Assignment 1 Solution

FALL 2023

Note: Please Don't make copy paste

Please change according to your requirements.

1) Find out the physical address from your segment: offset pair

Physical Address = Segment + Offset

VU ID = BC230212345

Segment: 2302

Offset: 1234

Physical Address = 23020 + 01234

Physical Address = 24254

2) What will be the last possible physical address accessible using your segment address?

Physical Address = Segment + Max Offset

Max Offset = FFFF

Physical Address = 23020 + 0FFFF

Physical Address = 3301F

3) What will be the first possible physical address accessible using your segment address?

Physical Address = Segment + Min Offset

Min offset = 0000

Physical Address = 23020 + 00000

Physical Address = 23020

- 4) Write assembly language instruction to store any data in your offset address of current code segment.

```
[org 0x0100]  
data: dw 42  
mov byte [offset_address], data  
mov ax, 0x4c00  
int 0x21
```

- 5) Write assembly language instruction to store any data in your segment offset pair.

```
org[0x0100]  
data: dw 42  
mov ax, 0x1904  
mov ds, ax  
mov [segment_address], data  
mov ax, 0x4c00  
int 0x21
```

Task2

```
[org 0x0100]  
jmp start  
stdId: dw 1, 2, 3, 4, 5, 6, 7, 8, 9  
odd_sum: dw 0  
answer: dw 0  
start:  
mov bx, stdId  
mov cx, 9  
loop1:  
test word[bx], 1  
jnz odd_number  
add ax, [bx]  
jmp next_number  
odd_number:  
mov dx, [bx]  
add [odd_sum], dx  
next_number:  
add bx, 2  
sub cx, 1  
jnz loop1  
sub ax, [odd_sum]  
mov [answer], ax  
mov ax, 0x4c00  
int 0x21
```