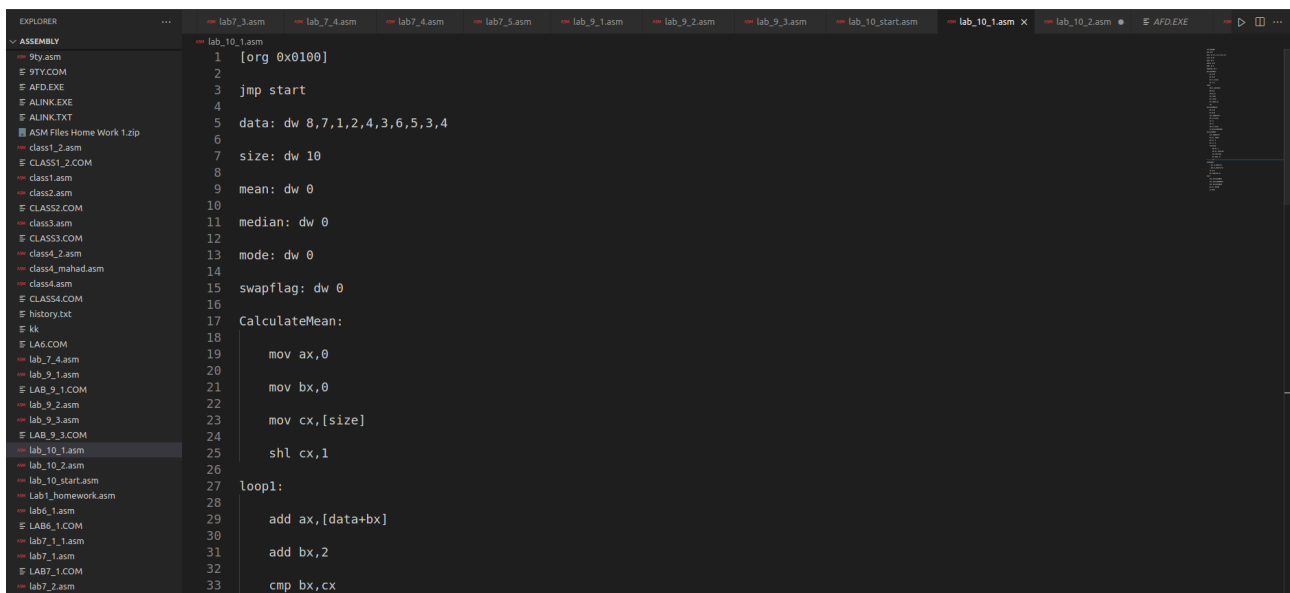Name: **Muhammad Sherjeel Akhtar**

Roll No: 20P-0101

Subject: **Computer Organization And Assembly Language**

Lab Task No: 10

Submitted To Respected Sir: **Khurram Shahzad**

Date: 11th April, 2022

lab_10_1.asm

```asm
[org 0x0100]

jmp start

data: dw 8,7,1,2,4,3,6,5,3,4

size: dw 10

mean: dw 0

median: dw 0

mode: dw 0

swapflag: dw 0

CalculateMean:

    mov ax,0

    mov bx,0

    mov cx,[size]

    shl cx,1

loop1:

    add ax,[data+bx]

    add bx,2

    cmp bx,cx
```

```asm
28
29        add ax,[data+bx]
30
31        add bx,2
32
33        cmp bx,cx
34
35        jne loop1
36
37        div [size]
38
39        mov [mean],ax
40
41        ret
42
43   CalculateMedian:
44
45        mov ax,0
46
47        mov bx,0
48
49        call bubblesort
50
51        mov cx,[size]
52
53        shr cx
54
55        shl cx
56
57        cmp cx,[size]
```

.

```asm
56
57     cmp cx,[size]
58
59     je CalculateMinMean
60
61 CalculateMode:
62
63     call bubblesort
64
65     mov ax, [data]
66
67     mov bx, 0
68
69     mov cx, 0
70
71     innerloop:
72
73         add bx, 2
74
75         cmp ax, [data+bx]
76
77         jne innerloop
78
79         mov mode, ax
80
81         ret
82
```

.

```
77        jne innerloop
78
79        mov mode, ax
80
81        ret
82
83   calMinMean:
84
85       mov ax,[data+cx]
86
87       add ax,[data+cx-2]
88
89       shr ax,1
90
91       mov [mediana],ax
92
```
.

```
 92
 93   start:
 94
 95       call CalculateMean
 96
 97       call CalculateMedian
 98
 99       call CalculateMode
100
101       mov ax, 0x4c00
102
103       int 0x21
104
```