



MICROPROCESSOR LABORATORY

Assignment No. 1



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DIVISION :- A

Assignment No. 1

Program :

```
%macro read_or_print 4
mov Rax, %1
mov Rdi, %2
mov Rsi, %3
mov Rdx, %4
syscall
%endmacro
```

```
%macro exit 0
mov rax,60
mov rdi,0
syscall
%endmacro
```

```
section .bss
array resd 200
counter resb 1
```

```
section .text
global _start
_start:
```

```
; Accept numbers in an array
mov byte[counter],09
mov rsi,array
loop:
read_or_print 0,0,rsi,17
add Rsi,17
dec byte[counter]
jnz loop
```

```
;display Contents of Array
mov byte [counter],09
mov rsi, array
loop1:
read_or_print 1,1,rsi,17
add Rsi, 17
dec byte [counter]
jnz loop1
exit
```

</> Code ≡ Input >_ Output

▶ Run

📄 Save

```
1 %macro read_or_print 4
2   mov Rax, %1
3   mov Rdi, %2
4   mov Rsi, %3
5   mov Rdx, %4 syscall
6 %endmacro
7
8 %macro exit 0 mov rax,60 mov rdi,0 syscall
9 %endmacro
10
11 section .bss array resd 200
12 counter resb 1
13
14 section .text global _start
15 _start:
16
17 ; Accept numbers in an array mov byte[counter],09
18 mov rsi,array loop:
19 read_or_print 0,0,rsi,17 add Rsi,17
20 dec byte[counter] jnz loop
```

</> Code ≡ Input >_ Output

▶ Run

📄 Save

```
8 %macro exit 0 mov rax,60 mov rdi,0 syscall
9 %endmacro
10
11 section .bss array resd 200
12 counter resb 1
13
14 section .text global _start
15 _start:
16
17 ; Accept numbers in an array mov byte[counter],09
18 mov rsi,array loop:
19 read_or_print 0,0,rsi,17 add Rsi,17
20 dec byte[counter] jnz loop
21
22 ;display Contents of Array mov byte [counter],09 mov rsi, array
23 loop1:
24 read_or_print 1,1,rsi,17 add Rsi, 17
25 dec byte [counter] jnz loop1
26 exit
27 |
```

Input :

</> Code

≡

 Input >_ Output

▶ Run

📄 Save

```
1 0123456789ABCDEF
2 123456789ABCDEF0
3 23456789ABCDEF01
4 3456789ABCDEF012
5 456789ABCDEF0123
6 56789ABCDEF01234
7 6789ABCDEF012345
8 789ABCDEF0123456
9 89ABCDEF01234567
```

Output :

</> Code

≡

 Input >_ Output

▶ Run

📄 Save

```
0123456789ABCDEF
123456789ABCDEF0
23456789ABCDEF01
3456789ABCDEF012
456789ABCDEF0123
56789ABCDEF01234
6789ABCDEF012345
789ABCDEF0123456
89ABCDEF01234567
[Program exited with exit code 0]
```