

# COAL LAB 7

## 23K-0057 BAI-4A

### Q1. TITLE My First Program (Text.asm)

```
INCLUDE Irvine32.inc
```

```
.data
intArr WORD 1,2,3,4,5,6,7,8,9,10
intCpy WORD 10 dup(?)
```

```
.code
main PROC
mov esi, OFFSET intArr
mov edx, OFFSET intCpy
mov ecx, 10
    MOVE:
        push WORD PTR [esi]
        pop eax
        mov [edx], eax
        add esi, 2
        add edx, 2
        loop MOVE
```

```
mov edx, OFFSET intCpy
mov ecx, 10
    print:
        movzx eax, WORD PTR [edx]
        call writeDec
        call crlf
        add edx, 2
        loop print
```

```
call dumpregs
exit
main ENDP
END main
```

```
1
2
3
4
5
6
7
8
9
10
```

```
EAX=0000000A  EBX=00861000  ECX=00000000  EDX=00246028
ESI=00246014  EDI=002410AA  EBP=00AFFD84  ESP=00AFFD8C
EIP=0024369E  EFL=00000206  CF=0   SF=0   ZF=0   OF=0   AF=0   PF=1
```

### Q2. TITLE My First Program (Text.asm)

```
INCLUDE Irvine32.inc
```

```

.data
intArr WORD 2,4,6
sum WORD 0

.code
main PROC
    mov ecx, 3
    mov esi, 0
    mov ebx, 0

    findsum:
        push [intArr + esi]
        pop ax
        add sum, ax
        add esi, 2
        loop findsum

    movzx eax, sum
    call writeDec

call dumpregs
exit
main ENDP
END main

```

12

```

EAX=0000000C  EBX=00000000  ECX=00000000  EDX=003B10AA
ESI=00000006  EDI=003B10AA  EBP=00CFFD94  ESP=00CFFD88
EIP=003B3695  EFL=00000202  CF=0   SF=0   ZF=0   OF=0   AF=0   PF=0

```

**Q3.** TITLE My First Program (Text.asm)  
INCLUDE Irvine32.inc

```

.data
array1 DWORD 1,2,3,4,5
array2 DWORD 6,7,8,9,10
sum  DWORD 0

.code
main PROC
call sumArray1
mov eax, edx
call sumArray2
add eax, edx
call writeDec
exit
main ENDP

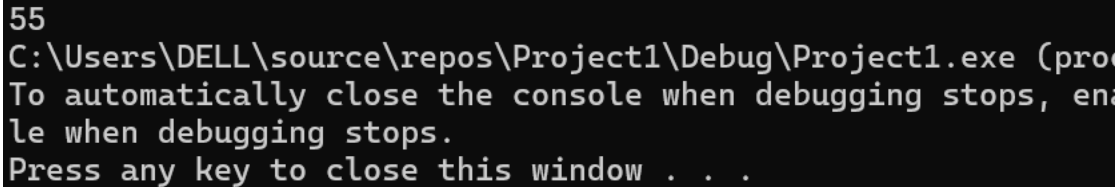
sumArray1 PROC
mov edx, 0
mov ecx, 5
mov esi, 0
    loop1:
        add edx, [array1 + esi]
        add esi, 4
        loop loop1
ret
sumArray1 ENDP

```

```

sumArray2 PROC
mov edx, 0
mov ecx, 5
mov esi, 0
    loop2:
        add edx, [array2 + esi]
        add esi, 4
        loop loop2
ret
sumArray2 ENDP
exit
END main

```



```

55
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le when debugging stops.
Press any key to close this window . . .

```

#### Q4. TITLE My First Program (Text.asm)

```
INCLUDE Irvine32.inc
```

```

.data
    star BYTE "**", 0
    space BYTE " ", 0
    input BYTE "Enter number of columns: ", 0
    col DWORD ?

```

```

.code
main PROC
    mov edx, OFFSET input
    call WriteString
    call ReadDec
    mov col, eax
    call crlf

```

```

    call printPattern
    call crlf
    exit
main ENDP

```

```
printPattern PROC
```

```

    mov ecx, col
    mov eax, 1

```

```

L1:
    push ecx
    mov ebx, ecx
    mov ecx, ebx

```

```

L2:
    mov edx, OFFSET space
    call WriteString
    loop L2

```

```
    mov ecx, eax
```

```

L3:
    mov edx, OFFSET star
    call WriteString

```

```

        loop L3

        inc eax

        call crlf
        pop ecx

        loop L1

    ret
printPattern ENDP
exit
END main

```

Enter number of columns: 5

```

    *
   **
  ***
 ****
*****

```

#### Q5. TITLE My First Program (Text.asm)

```
INCLUDE Irvine32.inc
```

```

.data
intNum DWORD ?
msg1 byte "Enter the N number for the sum:", 0

```

```

.code
main PROC
    mov edx, OFFSET msg1
    call writeString
    call readDec
    mov intNum, eax
    call findSum
    mov eax, edx
    call writeDec

    exit
main ENDP

```

```

findSum PROC
    mov ecx, intNum
    mov edx, 0
    loop1:
        add edx, ecx
        loop loop1

    ret
findSum ENDP
exit
END main

```

Enter the N number for the sum:6

21

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To automatically close the console when debugging stops, enable when debugging stops.

Press any key to close this window . . .