

Ali Zain K214653

Task #1:

```
T1.asm  X
4  prompt BYTE "Generating 20 random integers between 0 and 990",0
5  .code
6  MAIN PROC
7  mov eax, black + (green*16)
8  call SetTextColor
9  call crlf
10 call clrscr
11 mov edx, OFFSET prompt
12 call writeString
13 call crlf
14 mov eax, 991
15 mov ecx, 20
16 mov edx, 0
17 inc dh
18 generate:
19 call Gotoxy
20 call RandomRange
21 call WriteDec
22 mov eax, 5
23 call delay
24 mov eax, 991
25 call crlf
26 add dh, 1
27 add dl, 2
28 loop generate
29 exit
30 MAIN ENDP
31 END MAIN
```

Microsoft Visual Studio Debug Console

Generating 20 random integers between 0 and 990

604
792
135
736
696
932
526
158
165
598
350
863
805
114
813
403
281
713
226
594

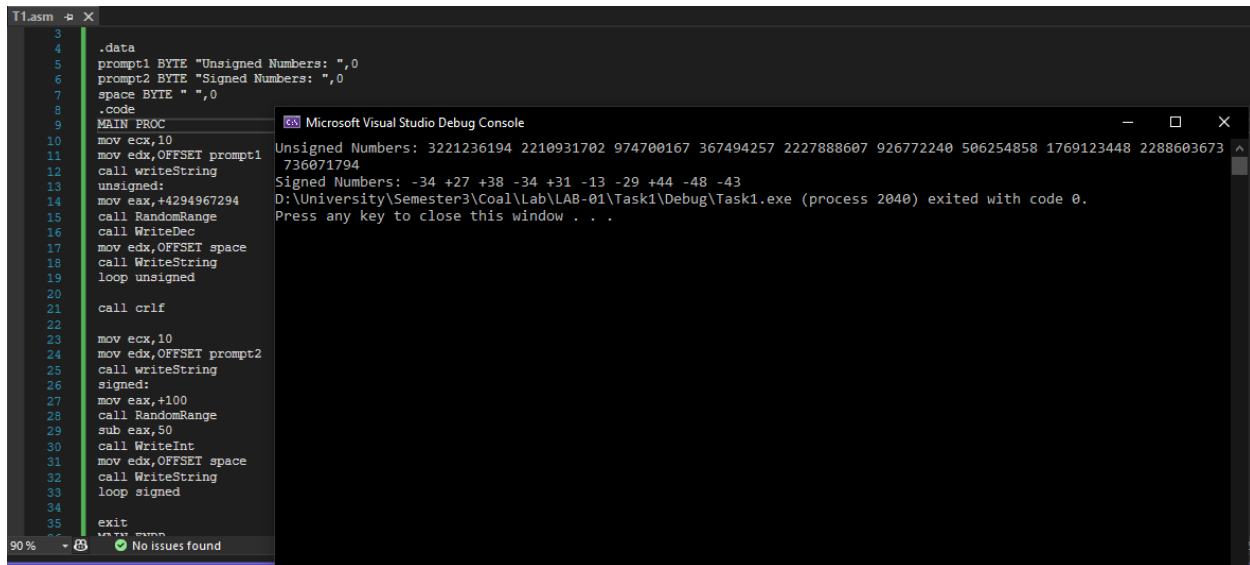
D:\University\Semester3\Coatl\Lab\LAB-01\Task1\Debug\Task1.exe (process 11808) exited with code 0.
Press any key to close this window . . .

100% No issues found

Task #2:

[illegible]

Task #3:



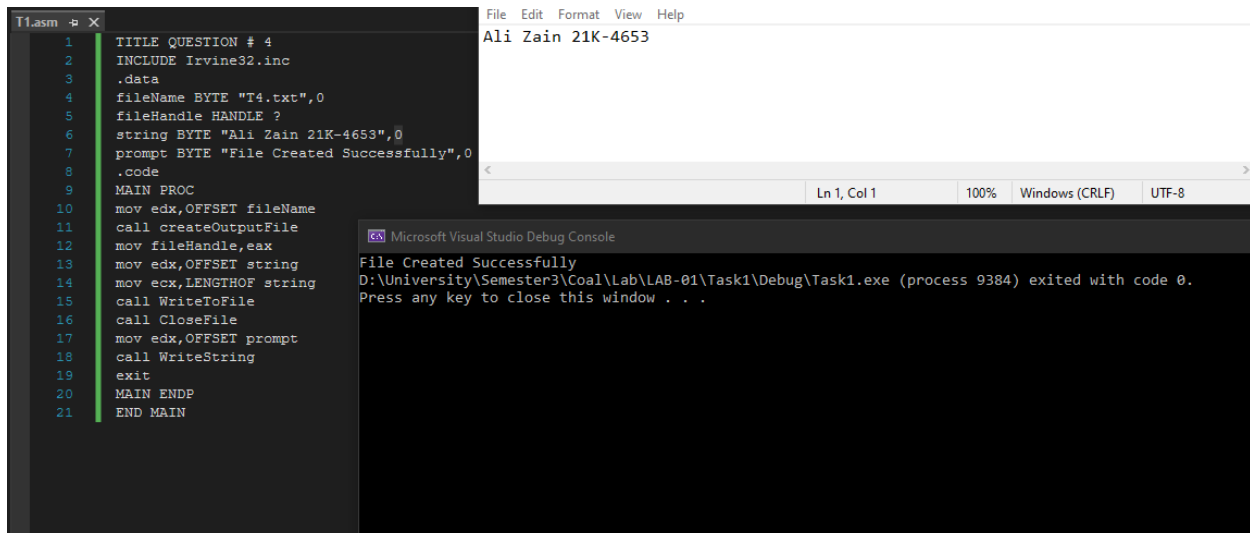
The screenshot shows the Visual Studio IDE with an assembly file named `T1.asm` open. The code defines two prompts, "Unsigned Numbers:" and "Signed Numbers:", and generates random numbers for each. The debug console shows the output of the program, displaying two rows of 10 unsigned and signed integers. The process exited with code 0.

```
3 .data
4 prompt1 BYTE "Unsigned Numbers: ",0
5 prompt2 BYTE "Signed Numbers: ",0
6 space BYTE " ",0
7 .code
8 MAIN PROC
9     mov ecx,10
10    mov edx,OFFSET prompt1
11    call writeString
12    unsigned:
13    mov eax,4294967294
14    call RandomRange
15    call WriteDec
16    mov edx,OFFSET space
17    call WriteString
18    loop unsigned
19
20    call crlf
21
22    mov ecx,10
23    mov edx,OFFSET prompt2
24    call writeString
25    signed:
26    mov eax,100
27    call RandomRange
28    sub eax,50
29    call WriteInt
30    mov edx,OFFSET space
31    call WriteString
32    loop signed
33
34    exit
35    MAIN ENDP
```

Microsoft Visual Studio Debug Console

```
Unsigned Numbers: 3221236194 2210931702 974700167 367494257 2227888607 926772240 506254858 1769123448 2288603673
736071794
Signed Numbers: -34 +27 +38 -34 +31 -13 -29 +44 -48 -43
D:\University\Semester3\Coal\Lab\LAB-01\Task1\Debug\Task1.exe (process 2040) exited with code 0.
Press any key to close this window . . .
```

Task #4:



The screenshot shows the Visual Studio IDE with an assembly file named `T1.asm` open. The code creates a file named `T4.txt` and writes the string "Ali Zain 21K-4653" to it. The debug console shows the output of the program, displaying the message "File Created Successfully" and the string "Ali Zain 21K-4653". The process exited with code 0.

```
1 TITLE QUESTION # 4
2 INCLUDE Irvine32.inc
3 .data
4 fileName BYTE "T4.txt",0
5 fileHandle HANDLE ?
6 string BYTE "Ali Zain 21K-4653",0
7 prompt BYTE "File Created Successfully",0
8 .code
9 MAIN PROC
10    mov edx,OFFSET fileName
11    call createOutputFile
12    mov fileHandle,eax
13    mov edx,OFFSET string
14    mov ecx,LENGTHOF string
15    call WriteToFile
16    call CloseFile
17    mov edx,OFFSET prompt
18    call WriteString
19    exit
20 MAIN ENDP
21 END MAIN
```

File Edit Format View Help

```
Ali Zain 21K-4653
```

Microsoft Visual Studio Debug Console

```
File Created Successfully
D:\University\Semester3\Coal\Lab\LAB-01\Task1\Debug\Task1.exe (process 9384) exited with code 0.
Press any key to close this window . . .
```