

```
E:\ubb\teme asc\tema lab 5\pb1.asm - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

pb1.asm
5
6 ; declare external functions needed by our program
7 extern exit ; tell nasm that exit exists even if we won't be defining it
8 import exit msvcrt.dll ; exit is a function that ends the calling process. It is defined in msvcrt.dll
9 ; msvcrt.dll contains exit, printf and all the other important C-runtime specific functions
10
11 ; our data is declared here (the variables needed by our program)
12 segment data use32 class=data
13 ; ...
14 s db 1,2,3,4 ;s:1,2,3,4
15 ls EQU $-s;ls=lungime sirului=4
16 d times ls+ls db 0;d=0,0,0,0
17
18 ; our code starts here
19 segment code use32 class=code
20 start:
21 ; ...
22 ;Se da un sir de octeti S de lungime l. Sa se construiasca sirul D de lungime l-1 astfel incat elementele din D sa reprezinte produsul dintre fiecare
23 2 elemente consecutive S(i) si S(i+1) din S
24 MOV EBX, 1
25 repeta:
26 mov AL,[s+EBX] ; in AL punem termnul al doilea din inmultirea celor doi termeni consecutivi
27 dec EBX; scadem EBX cu 1
28 mul byte[s+EBX];inmultim AL cu primul termen din inmultirea celor doi termeni consecutiv
29 mov [d+EBX*2], AX ;punem in d pe pozitia EBX*2 rezultatul
30 inc EBX; incrementam ebx de 2 ori pentru a avea termenul corect la urmatoarea inmultire
31 inc EBX
32 cmp EBX, ls;comparam pentru a putea iesi din loop
33 JB repeta ;facem saltul if below
34 ; exit(0)
35 push dword 0 ; push the parameter for exit onto the stack
36 call [exit] ; call exit to terminate the program
37
```

ASM Build - Success

Output Error List

ALINK v1.6 (C) Copyright 1998-9 Anthony A.J. Williams.All Rights ReservedLoading file E:\ubb\teme asc\tema lab 5\pb1.objmatched Externsmatched ComDefsGenerating PE file E:\ubb\teme asc\tema lab 5\pb1.exe

Assembly language source file

length : 1,734 lines : 37

Ln : 33 Col : 41 Sel : 0 | 0

Unix (LF)

UTF-8

INS

Type here to search

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OllDbg - pb1.exe - CPU - main.exe - [CPU - main.exe - pb1]

FileViewDebugTracePluginsOptionsWindowsHelp

0040201C? 83FB 04JB SHOR 00402005

00402021? 72 E4PUSH 0

00402023FF15 3C30400CALL DW0R0 PTR DS:[<msvcrt.exit>]

004020290000ADD BYTE PTR DS:[EAX],AL

0040202B0000ADD BYTE PTR DS:[EAX],AL

0040202D0000ADD BYTE PTR DS:[EAX],AL

0040202F0000ADD BYTE PTR DS:[EAX],AL

004020310000ADD BYTE PTR DS:[EAX],AL

004020330000ADD BYTE PTR DS:[EAX],AL

004020350000ADD BYTE PTR DS:[EAX],AL

004020370000ADD BYTE PTR DS:[EAX],AL

004020390000ADD BYTE PTR DS:[EAX],AL

0040203B0000ADD BYTE PTR DS:[EAX],AL

0040203D0000ADD BYTE PTR DS:[EAX],AL

0040203F0000ADD BYTE PTR DS:[EAX],AL

004020410000ADD BYTE PTR DS:[EAX],AL

004020430000ADD BYTE PTR DS:[EAX],AL

004020450000ADD BYTE PTR DS:[EAX],AL

004020470000ADD BYTE PTR DS:[EAX],AL

004020490000ADD BYTE PTR DS:[EAX],AL

0040204B0000ADD BYTE PTR DS:[EAX],AL

0040204D0000ADD BYTE PTR DS:[EAX],AL

0040204F0000ADD BYTE PTR DS:[EAX],AL

004020510000ADD BYTE PTR DS:[EAX],AL

004020530000ADD BYTE PTR DS:[EAX],AL

004020550000ADD BYTE PTR DS:[EAX],AL

004020570000ADD BYTE PTR DS:[EAX],AL

004020590000ADD BYTE PTR DS:[EAX],AL

0040205B0000ADD BYTE PTR DS:[EAX],AL

0040205D0000ADD BYTE PTR DS:[EAX],AL

0040205F0000ADD BYTE PTR DS:[EAX],AL

004020610000ADD BYTE PTR DS:[EAX],AL

004020630000ADD BYTE PTR DS:[EAX],AL

004020650000ADD BYTE PTR DS:[EAX],AL

004020670000ADD BYTE PTR DS:[EAX],AL

004020690000ADD BYTE PTR DS:[EAX],AL

0040206B0000ADD BYTE PTR DS:[EAX],AL

0040206D0000ADD BYTE PTR DS:[EAX],AL

0040206F0000ADD BYTE PTR DS:[EAX],AL

004020710000ADD BYTE PTR DS:[EAX],AL

004020730000ADD BYTE PTR DS:[EAX],AL

004020750000ADD BYTE PTR DS:[EAX],AL

004020770000ADD BYTE PTR DS:[EAX],AL

004020790000ADD BYTE PTR DS:[EAX],AL

0040207B0000ADD BYTE PTR DS:[EAX],AL

0040207D0000ADD BYTE PTR DS:[EAX],AL

0040207F0000ADD BYTE PTR DS:[EAX],AL

004020810000ADD BYTE PTR DS:[EAX],AL

004020830000ADD BYTE PTR DS:[EAX],AL

004020850000ADD BYTE PTR DS:[EAX],AL

004020870000ADD BYTE PTR DS:[EAX],AL

004020890000ADD BYTE PTR DS:[EAX],AL

0040208B0000ADD BYTE PTR DS:[EAX],AL

0040208D0000ADD BYTE PTR DS:[EAX],AL

0040208F0000ADD BYTE PTR DS:[EAX],AL

004020910000ADD BYTE PTR DS:[EAX],AL

004020930000ADD BYTE PTR DS:[EAX],AL

004020950000ADD BYTE PTR DS:[EAX],AL

004020970000ADD BYTE PTR DS:[EAX],AL

004020990000ADD BYTE PTR DS:[EAX],AL

0040209B0000ADD BYTE PTR DS:[EAX],AL

0040209D0000ADD BYTE PTR DS:[EAX],AL

0040209F0000ADD BYTE PTR DS:[EAX],AL

Registers (32Now!)

ECX 0019000C
EDX 00402000 pb1.<ModuleEntryPoint>
EBX 00000004
ESP 0019FF74
EBP 0019FF00
ESI 00402000 pb1.<ModuleEntryPoint>
EDI 00402000 pb1.<ModuleEntryPoint>
EIP 0040201F pb1.0040201F
C 0 ES 002B 32bit 0(FFFFFFFF)
P 1 CS 0023 32bit 0(FFFFFFFF)
H 0 SS 002B 32bit 0(FFFFFFFF)
Z 1 DS 002B 32bit 0(FFFFFFFF)
S 0 FS 0053 32bit 2B8000(FFF)
T 0 GS 002B 32bit 0(FFFFFFFF)
D 0
I 0 LastErr 000000BB ERROR_SEM_NOT_FOUND
EFL 00000246 (NO,NB,E,BE,HS,PE,GE,LE)
MM0 0.0 0.0
MM1 0.0 0.0
MM2 0.0 0.0
MM3 0.0 0.0
MM4 0.0 0.0
MM5 0.0 0.0
MM6 0.0 0.0
MM7 0.0 0.0
XMM0 00000000 00000000 00000000 00000000
XMM1 00000000 00000000 00000000 00000000
XMM2 00000000 00000000 00000000 00000000
XMM3 00000000 00000000 00000000 00000000
XMM4 00000000 00000000 00000000 00000000
XMM5 00000000 00000000 00000000 00000000
XMM6 00000000 00000000 00000000 00000000
XMM7 00000000 00000000 00000000 00000000
MXCSR 00001F00 FZ 0 DZ 0 Err 0 0 0 0 0
Rnd NEAR Mask 1 1 1 1 1 1

Jump is not taken
Dest=00402005 (pb1.<ModuleEntryPoint>+5)

pb1.<ModuleEntryPoint>+1F

AddressHex dumpASCII

0040100001 02 03 04 02 00 06 00 0C 00 00 00 00 00 00 00 00
0040101000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040102000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040103000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040104000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040105000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040106000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040107000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040108000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040109000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
004010A000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
004010B000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
004010C000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
004010D000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
004010E000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
004010F000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040110000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040111000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040112000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040113000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040114000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040115000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040116000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040117000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040118000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0040119000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
004011A000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
004011B000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
004011C000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
004011D000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
004011E000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

0019FF7476C8FA29002B5000P+RETURN to KERNEL32.BaseThreadInitThunk+19
0019FF7876C8FA10002B5000P+KERNEL32.BaseThreadInitThunk
0019FF7C0019FFDC002B5000P+
0019FF84776B7A9E002B5000P+RETURN to ntdll.776B7A9E
0019FF88002B5000P+
0019FF8C84D56E9000000000P+
0019FF9000000000P+
0019FF9400000000P+
0019FF98002B5000P+
0019FF9C00000000P+
0019FFA000000000P+
0019FFA400000000P+
0019FFA800000000P+
0019FFAC00000000P+
0019FFB000000000P+
0019FFB400000000P+
0019FFB800000000P+
0019FFBC00000000P+
0019FFC000000000P+
0019FFC40019FFC0000000P+
0019FFC800000000P+
0019FFCC0019FFE400776CD400P+Pointer to next SEH record
0019FFD0776CD400F3B95210P+SE handler
0019FFD800000000P+
0019FFDC0019FFEC00000000P+
0019FFE000776B7A6E00000000P+RETURN from ntdll.776B7A6F to ntdll.776B7A6E
0019FFE400000000P+End of SEH chain
0019FFE8776D8A3800000000P+SE handler
0019FFEC00000000P+
0019FFF000000000P+

Paused

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```

12 segment data use32 class=data
13 ; ...
14 s db '+', '4', '2', 'a', '@', '3', '$', '*' ;S: '+', '4', '2', 'a', '@', '3', '$', '*'
15 ls equ $-s;ls=lungimea sirului s=8
16 l db '!', '@', '#', '$', '%', '^', '&', '*' ;l=sirul de caractere care trebuie scoase din s si puse in d
17 ls2 equ $-l;ls2=lungime sirului l=8
18 d times ls db 0;d=sirul pe care vrem sa l obtinem
19 ; our code starts here
20 segment code use32 class=code
21 start:
22 ; ...
23 ;Se da un sir de caractere S. Sa se construiasca sirul D care sa contina toate caracterele speciale (!@#$$%^&*) din sirul S
24 mov EBX,0;EBX=0=contor pentru sirul s
25 mov EDX,0;EDX=0=contor pentru sirul d
26 repeta:
27 mov ECX,0;ECX=0=control pentru sirul l
28 repeta2:
29 mov AL,[s+EBX];AL=elementul de ordin EBX din s
30 cmp AL,[l+ECX];comparam AL cu elementul de ordin ECX din l
31 jnz final;sarim peste repeta3 daca instructiunea de cmp anterioara seteaza ZF=0
32 repeta3:
33 mov [d+EDX],AL;pe pozitia EDX din sirul d il punem pe AL=elementul de ordin EBX din s
34 inc EDX;incrementam EDX pentru ca urmatorul numar sa fie pus pe pozitia urmatoare
35 inc AL;AL=AL+1
36 cmp AL,[s+ebx];comparand AL dupa incrementare cu fosta sa valoare vom seta ZF=0, pentru a iesi din loope
37 inc ECX;incrementam ECX, deoarece loope face dec ECX, loope sfarsindu se cand ZF=0
38 loope repeta
39 final
40 inc ECX;comparam ECX cu lungimea sirului l pentru a iesi din repeta2
41 cmp ECX,ls2;comparam ECX cu lungimea sirului l pentru a iesi din repeta2
42 jb repeta2
43 inc EBX;comparam EBX cu lungimea sirului s pentru a iesi din repeta
44 cmp EBX,ls;comparam EBX cu lungimea sirului s pentru a iesi din repeta
45 jb repeta
46 ; exit(0)
47 push dword 0 ; push the parameter for exit onto the stack

```

ASM Build - Success

Output Error List

E:\ubb\teme asc\tema lab 5\pb2.asm:39: warning: label alone on a line without a colon might be in error [-w-orphan-labels]ALINK v1.6 (C) Copyright 1998-9 Anthony A.J. Williams.All Rights ReservedLoading file E:\ubb\teme asc\tema lab 5\pb2.objmatched Externsmatched ComDefsgenerating PE file E:\ubb\teme asc\tema lab 5\pb2.exe

```

Registers (3DNow!)
ERX 00402000 pb2.<ModuleEntryPoint>
ECX 00000000
EDX 00000000
EBX 00000000
ESP 0019FE1C
EBP 0019FEF0
ESI 00000000
EDI 77775B40 ntdll.77775B40
EIP 776C2C9C ntdll.776C2C9C

C 0 ES 002B 32bit 0(FFFFFFFF)
P 0 CS 0023 32bit 0(FFFFFFFF)
A 0 SS 002B 32bit 0(FFFFFFFF)
Z 0 DS 002B 32bit 0(FFFFFFFF)
S 0 FS 0053 32bit 3F0000(FFF)
T 0 GS 002B 32bit 0(FFFFFFFF)
D 0
O 0 LastErr 0000007E ERROR_MOD_NOT_FOUND
EFL 00000202 (NO,NB,NE,A,NS,PO,GE,G)

MM0 0.0 0.0
MM1 0.0 0.0
MM2 0.0 0.0
MM3 0.0 0.0
MM4 0.0 0.0
MM5 0.0 0.0
MM6 0.0 0.0
MM7 0.0 0.0

XMM0 00000000 00000000 00000000 00000000
XMM1 00000000 00000000 00000000 00000000
XMM2 00000000 00000000 00000000 00000000
XMM3 00000000 00000000 00000000 00000000
XMM4 00000000 00000000 00000000 00000000
XMM5 00000000 00000000 00000000 00000000
XMM6 00000000 00000000 00000000 00000000
XMM7 00000000 00000000 00000000 00000000

MXCSR 00001F80 FZ 0 DZ 0 Err 0 0 0 0 0 0
Rnd NEAR Mask 1 1 1 1 1 1

```


Terminated