Name: Enas Morsy Mohamed Shehata

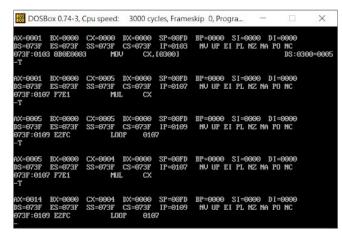
10:20

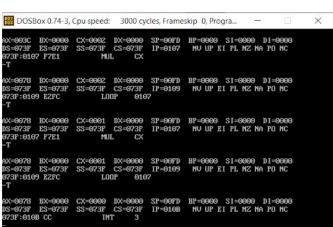
Micro: LAB1

Problem 1:

➤ Start AX=1

Loop using counter register (CX) from 5 to 0 step=-1 Every iteration AX =AX*CX





In the start ax=1

Put cx=content of 300 =5

Put ax= ax*cx =1*5=5

ax=5*4=14 H

ax=14*3=3C H

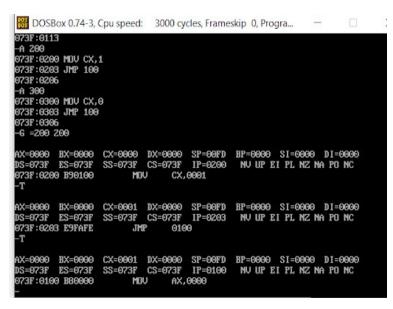
ax=3C*2=78 H

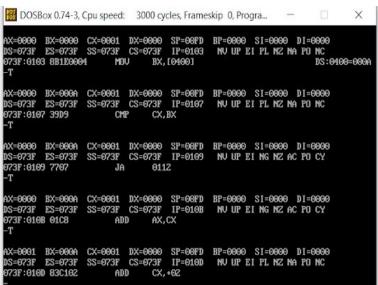
ax=78*1=78 H

Problem 2:

This code @ g=200 gets the sum of all odd numbers <=10 @ g=300 gets the sum of all even numbers <=10

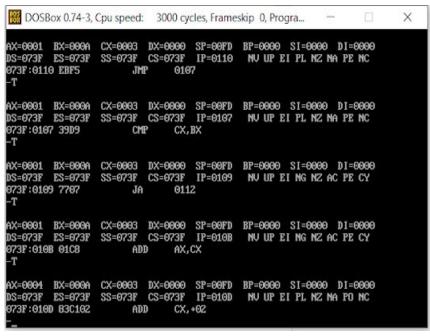
• G = 200 200:

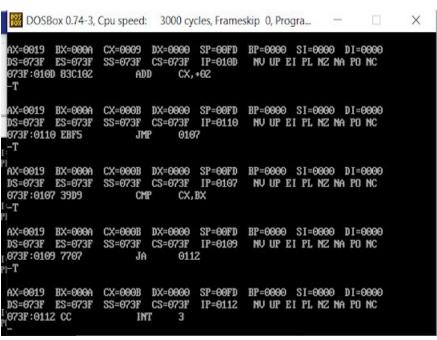




Ip =200 CX =1 Then jump to the main code ip=100

AX=0 BX=A AX=AX+CX=1





CX=5 H
AX=4+5=9 H
CX=7 H
AX=9+7=10 H
CX=9 H
AX=10+9=19 H
CX=B H > 10 stop

CX=3 H

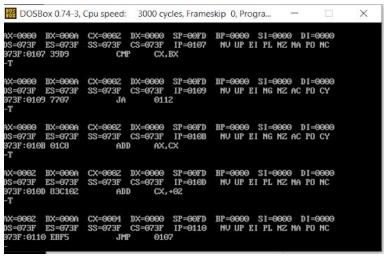
AX=1+3=4 H

• G = 300 300

DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Progra... X 073F:0300 MOV CX,0 073F:0303 JMP 100 073F:0306 -G =300 300 AX=0000 BX=0000 CX=0000 DX=0000 SP=00FD BP=0000 SI=0000 DI=0000 DS=073F ES=073F SS=073F CS=073F IP=0300 NV UP EI PL NZ NA PO NC MOV CX,0000 073F:0300 B90000 AX=0000 BX=0000 CX=0000 DX=0000 SP=00FD BP=0000 SI=0000 DI=0000 DS=073F ES=073F SS=073F CS=073F IP=0303 NV UP EI PL NZ NA PO NC 073F:0303 E9FAFD JMP 0100 AX=0000 BX=0000 CX=0000 DX=0000 SP=00FD BP=0000 SI=0000 DI=0000 DS=073F ES=073F SS=073F CS=073F IP=0100 NV UP EI PL NZ NA PO NC 073F:0100 B80000 MOU AX,0000 AX=0000 BX=0000 CX=0000 DX=0000 SP=00FD BP=0000 SI=0000 DI=0000 DS=073F ES=073F SS=073F CS=073F IP=0103 NV UP EI PL NZ NA PO NC BX.[0400] DS:0400=000A 973F:0103 8B1E0004 MOU

DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Progra... X AX=0000 BX=000A CX=0000 DX=0000 SP=00FD BP=0000 SI=0000 DI=0000 DS=073F ES=073F SS=073F CS=073F IP=0107 NV UP EI PL NZ NA PO NC 073F:0107 39D9 CMP CX, BX AX=0000 BX=000A CX=0000 DX=0000 SP=00FD BP=0000 SI=0000 DI=0000 DS=073F ES=073F SS=073F CS=073F IP=0109 NV UP EI NG NZ AC PE CY 973F:0109 7707 JA 0112 T AX-0000 BX-000A CX-0000 DX-0000 SP-00FD BP-0000 SI-0000 DI-0000 DS-073F ES-073F SS-073F CS-073F IP-010B NV UP EI NG NZ AC PE CY 973F:010B 01C8 AX,CX ADD AX=0000 BX=000A CX=0000 DX=0000 SP=00FD BP=0000 SI=0000 DI=0000 DS=073F ES=073F SS=073F CS=073F IP=010D NV UP EI PL ZR NA PE NC NU UP EI PL ZR NA PE NC 973F:010D 83C102 ADD CX,+02 -T AX=0000 BX=000A CX=000Z DX=0000 SP=00FD BP=0000 SI=0000 DI=0000 DS=073F ES=073F SS=073F CS=073F IP=0110 NV UP EI PL NZ NA PO NC 073F:0110 EBF5 JMP 0107

Ip =300
CX =0
Then jump to the main code
ip=100
AX=0
BX=A
AX=AX+CX=0



DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Progra...

AX=0014 BX=000A CX=000A DX=0000 SP=00FD BP=0000 SI=0000 DI=0000 DS=073F ES=073F SS=073F CS=073F IP=010B NU UP EI PL ZR NA PE NC AX, CX

T

AX=001E BX=000A CX=000A DX=0000 SP=00FD BP=0000 SI=0000 DI=0000 DS=073F:010D 83C102 ADD CX, +02

T

AX=001E BX=000A CX=000C DX=0000 SP=00FD BP=0000 SI=0000 DI=0000 DS=073F:0110 EBF5 JMP 0107

T

AX=001E BX=000A CX=000C DX=0000 SP=00FD BP=0000 SI=0000 DI=0000 DS=073F:0110 EBF5 SS=073F CS=073F IP=0110 NU UP EI PL NZ NA PE NC 073F:0100 73F:0100 73D CX=000C DX=0000 SP=00FD BP=0000 SI=0000 DI=0000 DS=073F:0100 7707 JA 0112

CX=2 H

AX=0+2= 2 H

CX=4 H

AX=2+4=6 H

CX=6 H

AX=6+6=C H

CX=8 H

AX=C+8=14 H

CX= AH

AX=14+A=1E H

CX=C H > 10 stop