



HACETTEPE UNIVERSITY  
ELECTRICAL AND ELECTRONICS ENGINEERING  
ELE338 MICROPROCESSOR ARCHITECTURE AND  
PROGRAMMING LAB.  
EXPERIMENTAL WORK 1  
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Student

Name: Egemen Can

Surname: Ayduğan

ID: 21728036

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## EMU 8086 CODE

```
org 100h

MOV BX,24
MOV CX,BX
SUB CX,0002h
MOV DI,0001h

TRY:
INC DI
MOV AX,BX
MOV DX,0
DIV DI
CMP DX,0
JE F1
LOOP TRY

MOV DX,BX
JMP FINISH

F1:
MOV DX,0FFFFh

FINISH:
ret
end
```

## Results:

registers		
	H	L
AX	00	01
BX	00	61
CX	00	00
DX	00	61
CS	F400	
IP	0154	
SS	0700	
SP	FFFA	
BP	0000	
SI	0000	
DI	0060	
DS	0700	
ES	0700	

I put the value in BX Register.  
BX = 97d = 61h  
This is a prime number.

registers		H	L
AX		00	31
BX		00	62
CX		00	60
DX		FF	FF
CS		F400	
IP		0154	
SS		0700	
SP		FFFA	
BP		0000	
SI		0000	
DI		0002	
DS		0700	
ES		0700	

I put the value in BX Register.  
 BX = 98d = 62h  
 This is not a prime number.

#### Comment:

When checking the prime number, I divided the values below the number one by one. I made a comparison with the CMP instruction 0, and if it is the same number, ZF = 1. Then, when Je command ZF = 1, I finished the code. If ZF is never 0 then I set DX to 09999h.