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## PRACTICE:

Lab8

File Edit Modify Execute Help

ta Dec

Registers

Name	Width	Data
	16	0
	12	0
	16	0
	1	0
	1	0
	16	0
	12	0
	1	0

Untitled X subtracta X

```
1 START:
2 INP
3 STA NUM
4 INP
5 CMA
6 INC
7 ADD NUM
8 OUT
9 HLT
10
11 NUM: .data 1 0
12
13
14
```

**Task 1:**

File Edit Modify Execute Help

Data Dec

Registers

Name	Width	Data
C	16	2
R	12	5
IR	16	3
.	1	-1
.	1	0
R	16	5
C	12	13
.	1	0

task 1 ca lab 8 X subtracta X

```

1 START:
2 INP
3 STA NUM
4 INP
5 CMA
6 INC
7 ADD NUM
8 STA NUM2
9 INP
10 CMA
11 INC
12 ADD NUM2
13 OUT
14 HLT
15
16 NUM: .data 1 0
17 NUM2: .data 1 0

```

```

KECUTING...
nter Inputs, the first of which must be an Integer: 5
nter Inputs, the first of which must be an Integer: 2
nter Inputs, the first of which must be an Integer: 1
utput: 2
KECUTION HALTED DUE TO AN EXCEPTION: No opcode matched the bits in the register: IR.

```

## TASK 2:

FileEditModifyExecuteHelp

DataDec

Registers

Name	Width	Data
AC	16	28672
AR	12	0
DR	16	4096
E	1	0
I	1	0
IR	16	4096
PC	12	6
S	1	-1

\*task 1 ca lab 8 Xsubtract.a XCA LAB TASK 3.CPU Xcatask2.cpu X

```
1 START:
2 ADD NUM1
3 CMA
4 INC
5 ADD NUM2
6 OUT
7 HLT
8
9 NUM2: .data 1 10
10 NUM1: .data 1 12
```

EXECUTING...  
Output: 28672  
EXECUTION HALTED NORMALLY due to the setting of the bit(s): [HALT-BIT]

### TASK 3:

FileEditModifyExecuteHelp

DataDec

Registers

Name	Width	Data
AC	16	2
AR	12	2
DR	16	4
E	1	-1
I	1	0
IR	16	2
PC	12	9
S	1	0

\*task 1 ca lab 8 ×subtract.a ×CA LAB TASK 3.CPU ×

```

1  START:
2  INP
3  STA NUM
4  INP
5  CMA
6  INC
7  ADD NUM
8  STA NUM
9  OUT
10 HLT
11
12 NUM: .data 1 0
13
14
15

```

EXECUTING...  
 Enter Inputs, the first of which must be an Integer: 4  
 Enter Inputs, the first of which must be an Integer: 2  
 Output: 2  
 EXECUTION HALTED DUE TO AN EXCEPTION: No opcode matched the bits in the register: IR.