

Logisim: main of Untitled

File Edit Project Simulate Window Help



Wiring
Gates
NOT Gate
Buffer
AND Gate
OR Gate
NAND Gate
NOR Gate
XOR Gate
XNOR Gate
Odd Parity
Even Parity
Controlled Buffer
Controlled Inverter

Placers
Arithmetic
Memory
Input/Output
Button
Joystick
Keyboard
LED
7-Segment Display
Hex Digit Display
LED Matrix
TTY

Pin

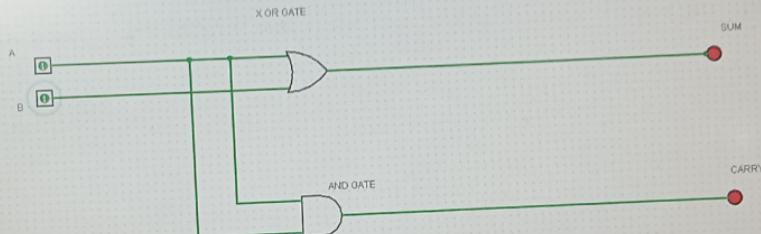
| | |
|----------------|--------------------|
| Facing | East |
| Output? | No |
| Data Bits | 1 |
| Three-state? | No |
| Pull Behavior | Unchanged |
| Label | |
| Label Location | West |
| Label Font | SansSerif Plain 12 |

HALF ADDER

USING XOR GATE AND AND GATE

APRADEEP

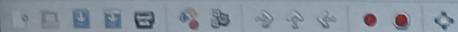
192472110



08:36
ENG
IN
27-02-2025

1 25°C
Partly sunny



**Registers**

| | | | |
|---------|-------|----|---|
| A | 00 | S | 0 |
| BC | 00 00 | Z | 0 |
| DE | 00 00 | AC | 0 |
| HL | 00 00 | P | 0 |
| PSW | 00 00 | | |
| PC | 42 07 | | |
| SP | 00 00 | | |
| Int-Reg | 00 | C | 0 |

Decimal - Hex Conversion

| Decimal | Hex |
|---------------------------------------|---------------------------------------|
| 0 | 0 |
| <input type="button" value="To Hex"/> | <input type="button" value="To Dec"/> |

I/O Ports

| | | | |
|--|---|---|----|
| 0 | - | + | 00 |
| <input type="button" value="Update Port Value"/> | | | |

Memory

| | | | |
|--|---|---|----|
| 0 | - | + | 00 |
| <input type="button" value="Update Memory"/> | | | |

Load me at

```

1 LHLD 2050
2 SPIL
3 LHLD 2052
5 KCHG
6 LXI H,0000H
7 LXI B,0000H
8 AGAIN: DAD SP
9 JNC START
10 INX B
11 START: DCX D
12 MOV A,E
13 ORA D
14 JNZ AGAIN
15 SHLD 2054
16 MOV L,C
17 MOV H,B
18 SHLD 2055
19 HLT
20
21
22

```

Data Stack KeyPad Memory I/O Ports

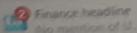
Address Variable Value Value (Decimal)

Line No Assembler Message

0 Program assembled successfully

Simulator: Program running

10:56
ENG IN 24-02-2025





Registers

Execute assembled and loaded program

| | | |
|---------|-------|------------|
| A | S 0 | 1 LDA 8500 |
| BC | 00 00 | 2 MOV B, A |
| DE | 00 00 | 3 LDA 8501 |
| HL | 00 00 | 4 SUB B |
| PSW | 00 00 | 5 STA 8502 |
| PC | 42 03 | 6 RST 1 |
| SP | FF FF | 7 |
| Int-Reg | 00 | 8 |
| | | 9 |

Decimal - Hex Conversion

| | |
|---|---|
| Decimal | Hex |
| 0 | 0 |
| <input type="button" value="⇒ To Hex"/> | <input type="button" value="⇐ To Dec"/> |

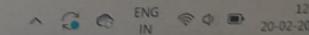
I/O Ports

| | | | |
|--|---|---|----|
| 0 | - | + | 00 |
| <input type="button" value="Update Port Value"/> | | | |

Memory

| | | | |
|--|---|---|----|
| 0 | - | + | 00 |
| <input type="button" value="Update Memory"/> | | | |

Simulator: Program running



Data Stack KeyPad Memory

Address Variable Value Value (Decimal)

Line No Assembler Message
0 Program assembled successfully

A | D D D

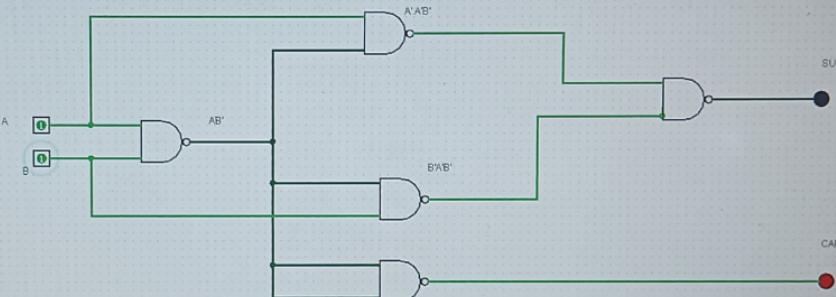
- + ↕ ↖ ↖ X
- main
- Wiring
- Gates
 - NOT Gate
 - Buffer
 - AND Gate
 - OR Gate
 - NAND Gate
 - NOR Gate
 - XOR Gate
 - XNOR Gate
 - Odd Parity
 - Even Parity
 - Controlled Buffer
 - Controlled Inverter
- Plexers
- Arithmetic
- Memory
- Input/Output
 - Button
 - Joystick
 - Keyboard
 - LED
 - 7-Segment Display
 - Hex Digit Display
 - LED Matrix
 - TTT

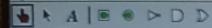
| Pin | |
|----------------|--------------------|
| Facing | East |
| Output? | No |
| Data Bits | 1 |
| Three-state? | No |
| Pull Behavior | Unchanged |
| Label | |
| Label Location | West |
| Label Font | SansSerif Plain 12 |

HALF ADDER USING NAND GATE

APRADEEP

192472118





main
Wiring
Gates
NOT Gate
Buffer
AND Gate
OR Gate
NAND Gate
NOR Gate
XOR Gate
XNOR Gate
Odd Parity
Even Parity
Controlled Buffer

Plexes
Arithmetic
Memory
Input/Output
Button
Joystick
Keyboard
LED
7-Segment Display
Hex Digit Display
LED Matrix
TTY

Pin

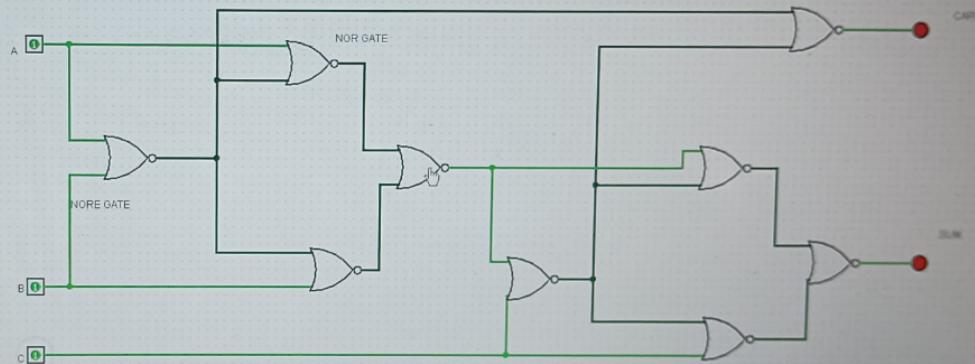
Padcp [East]
Output? No
data Bits 1
Three-state? No
pull Behavior Unchanged
label
label Location West
label Font SansSerif Plain 12

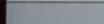
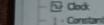
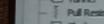
FULL ADDER USING

NOR GATE

APRADEEP

192472118





Label

Text

SandSerif Plain 12

Font

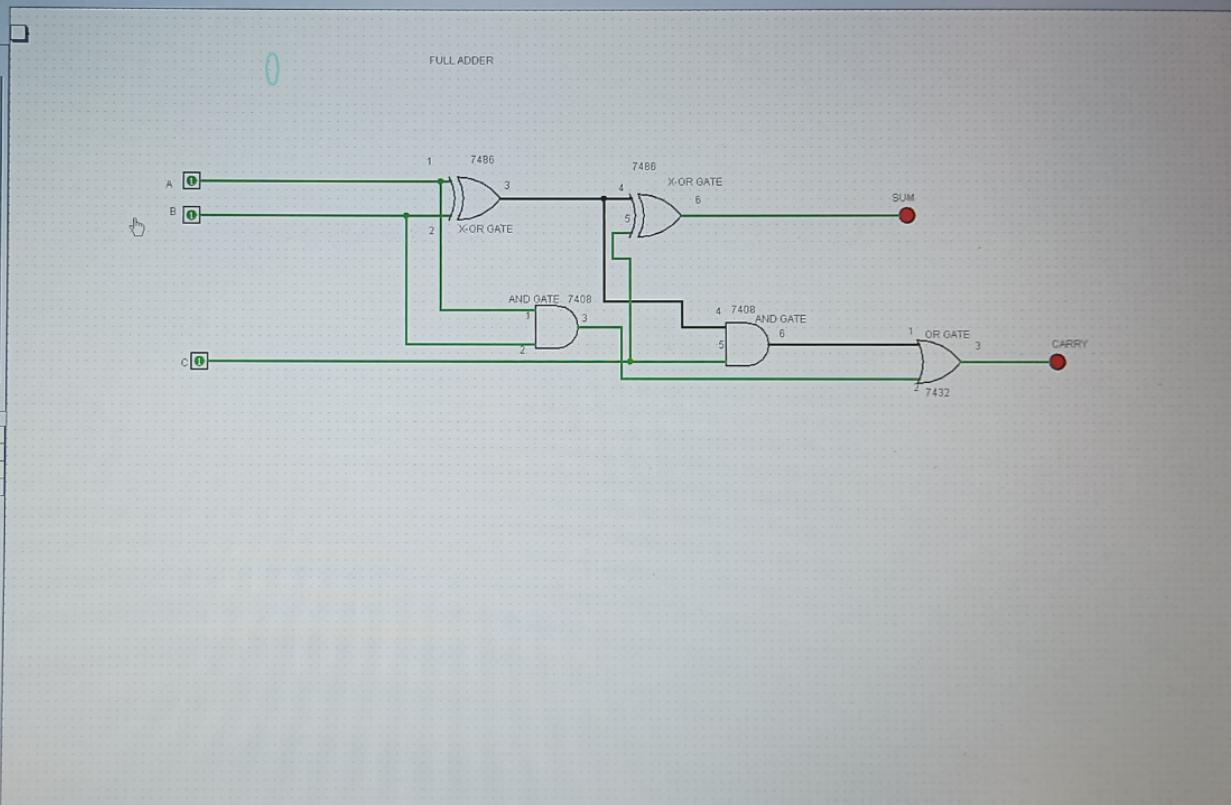
Center

Horizontal Alignment

Base

Vertical Alignment

100%



GNUSim8085 - 8085 Microprocessor Simulator

[File](#) [Reset](#) [Assembler](#) [Debug](#) [Help](#)

| Registers | | Flag |
|-----------|-------|------|
| A | 00 | S 0 |
| BC | 00 00 | Z 0 |
| DE | 00 00 | |
| HL | 00 00 | AC 0 |
| PSW | 00 00 | |
| PC | 00 00 | P 0 |
| SP | 00 00 | C 0 |
| Int-Reg | 00 | |

Decimal - Hex Conversion

| Decimal | Hex |
|------------------------|------------------------|
| 0 | 0 |
| To Hex | To Dec |

I/O Ports

| | | | |
|-----------------------------------|---|---|---|
| 0 | - | + | 0 |
| Update Port Value | | | |

Memory

| | | | |
|-------------------------------|---|---|---|
| 0 | - | + | 0 |
| Update Memory | | | |

Load me at 16 BIT MULTIPLICATION

```
1 LHLD 2050
2 SPHL
3 LHLD 2052
4 XCHG
5 LXI H, 0000H
6 LXI B, 0000H
7 AGAIN: DAD SP
8 JNC START
9 INR B
10 START: DCX D
11 MOV A, E
12 ORA D
13 JNZ AGAIN
14 SHLD 2054
15 SHLD 2054
16 MOV L, C
17 MOV H,B
18 SHLD 2055
19 HLT
20
```

[Data](#) [Stack](#) [KeyPad](#) [Memory](#) [I/O Ports](#)

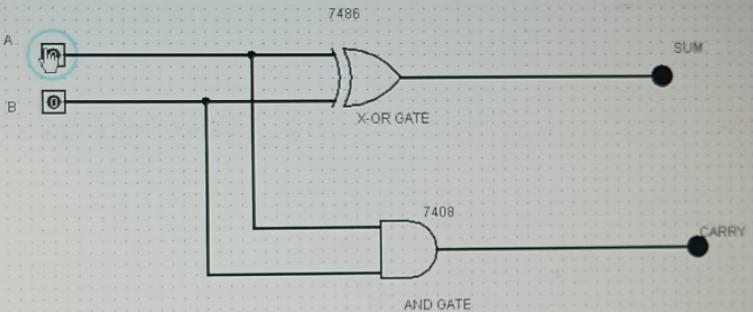
Address Variable Value Value (Decimal)

Line No Assembler Message

0 Program assembled successfully

Simulator: Idle

[Search](#) [Cloud](#) [File](#) [Folder](#) [Help](#) [Support](#) [Feedback](#)11:38
ENG IN 27-02-2025



nged

Genif Plain 12

GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers

| | |
|---------|-------|
| A | 00 |
| BC | 00 00 |
| DE | 00 00 |
| HL | 00 00 |
| PSW | 00 00 |
| PC | 00 00 |
| SP | 00 00 |
| Int-Reg | 00 |

Flag

| | |
|----|---|
| S | 0 |
| Z | 0 |
| AC | 0 |
| P | 0 |
| C | 0 |

Load me at:

```
1 LDA 8501
2 MOV B,A
3 LDA 8500
4 MVI C,00
5 LOOP: JC LOOP1
6 JC LOOP1
7 SUB B
8 INC C
9 JNP LOOP
10 STA 8503
11 DCR C
12 MOV A,C
13 LOOP1: STA 8502
14 RST 1
15
```

Data Stack KeyPad Memory I/O Ports

| Address | Variable | Value | Value (Decimal) |
|---------|----------|-------|-----------------|
| | | | |

Line No Assembler Message

0 Program assembled successfully

Decimal - Hex Conversion

| | |
|---------|-----|
| Decimal | Hex |
| 0 | 0 |

To Hex To Dec

I/O Ports

| | | | |
|---|---|---|---|
| 0 | - | + | 0 |
|---|---|---|---|

Update Port Value

Memory

| | | | |
|---|---|---|---|
| 0 | - | + | 0 |
|---|---|---|---|

Update Memory

Simulator: Idle

Trending videos

Search

hp

ENG IN 11:07 24-02-2023

assembled and loaded program

Data Stack KeyPad Memory I/O Ports

| | |
|--------|-------------------|
| S 0 | 1 LDA 8000 |
| 00 | 2 MOV B, A |
| 00 | 3 LDA 8001 |
| Z 1 | 4 MOV C, A |
| 00 | 5 CPI 00 |
| AC 0 | 6 JZ LOOP |
| 00 | 7 XRA A |
| 04 P 1 | 8 LOOP1: ADD B |
| FF | 9 DCR C |
| C 0 | 10 JZ LOOP |
| 0 | 11 JMP LOOP1 |
| | 12 LOOP: STA 8002 |
| | 13 RST 1 |

Hex Conversion

Hex

0

To Dec

+ 00

Update Port Value

+ 00

Update Memory

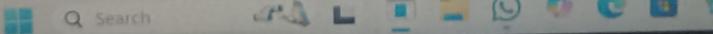
Data Stack KeyPad Memory I/O Ports

| Address | Variable | Value | Value (Decimal) |
|---------|----------|-------|-----------------|
| | | | |

Line No Assembler Message

0 Program assembled successfully

Simulator: Program running



12:38
ENG IN
20-02-2024



NMM

DIVISION~

16 bit

File Edit View

```
|LDA 8501  
MOV B, A  
LDA 8500  
MVI C,00  
LOOP: CMP B  
JC LOOP1  
SUB B  
INR C  
JMP LOOP  
STA 8503  
DCR C  
MOV A, C  
LOOP1: STA 8502  
RST 1
```



ADD

NMM

DIVISION~

16

File Edit View

```
LHLD 2050
SPHL
XCHG
LXI H,0000H
LXI B,0000H
AGAIN: DAD SP
JNC START
INX B
START: DCX D
MOV A,E
ORA D
JNZ AGAIN
SHLD 2054
MOV L,C
MOV H,B
SHLD 2055
HLT|
```



ADD

NMM

DIVISION~

16

File Edit View

8 BIT ADDITION 8085

```
|  
LDA 8000  
MOV B,A  
LDA 8001  
ADD B  
STA 8002  
RST 1  
HLT
```



ADD

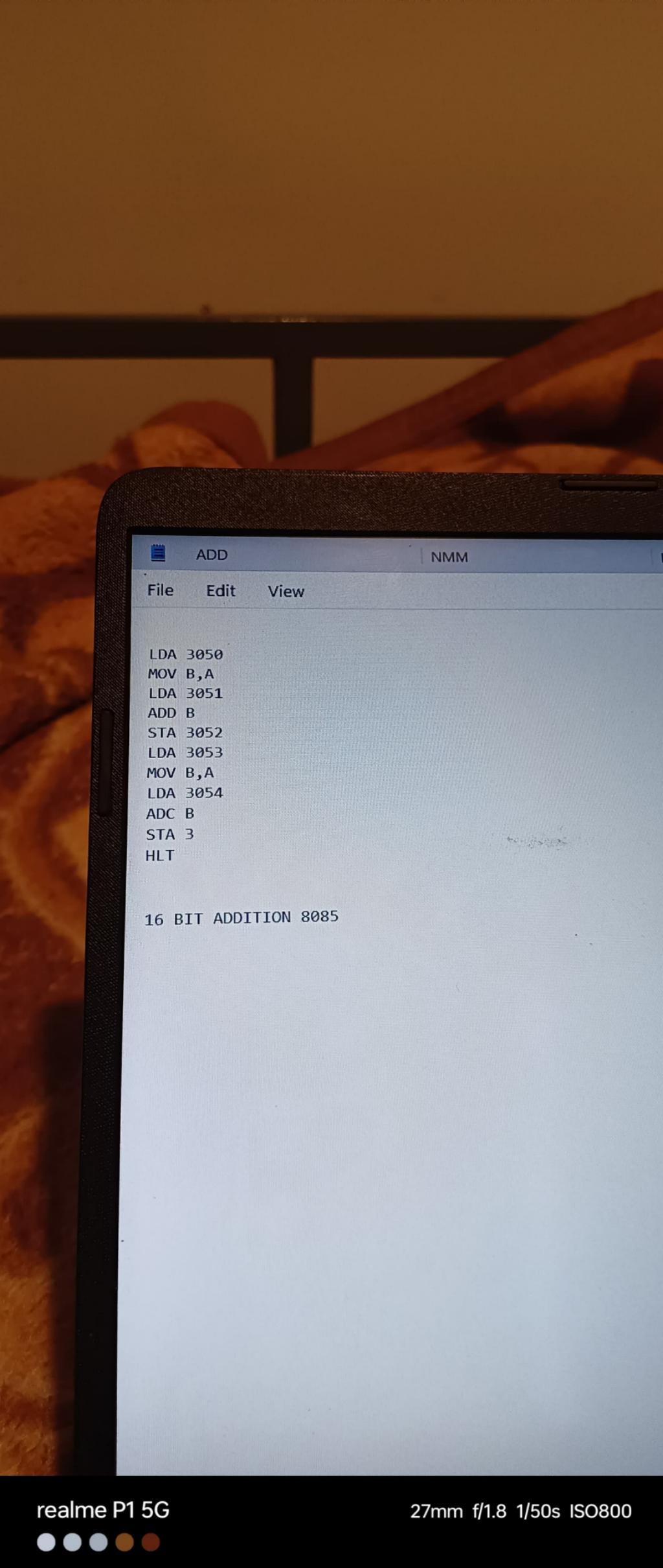
NMM

DIVISION~

File Edit View

8 BIT SUBTRACTION 8085

```
|  
LDA 8000  
MOV B,A  
LDA 8001  
SUB B  
STA 8002  
RST 1  
HLT
```



ADD

NMM

File Edit View

```
LDA 3050  
MOV B,A  
LDA 3051  
ADD B  
STA 3052  
LDA 3053  
MOV B,A  
LDA 3054  
ADC B  
STA 3  
HLT
```

16 BIT ADDITION 8085



ADD

NMM

D

File Edit View

16 BIT DIVISION 8085

```
LDA 8501
MOV B,A
LDA 8500
MVI C,00
LOOP: CMP B
JC LOOP1
SUB B
INR C
JMP LOOP
STA 8503
DCR C
MOV A,C
LOOP1: STA 8502
RST 1
```



ADD

NMM

DIVISION~

File Edit View

16 BIT MULTIPLICATION 8085

```
LDA 8501
MOV B,A
LDA 8500
MVI C,00
LOOP: CMP B
JC LOOP1
SUB B
INR C
JMP LOOP
STA 8503
DCR C
MOV A,C
LOOP1: STA 8502
RST 1
```

Ln 2, Col 1 149 characters

Trending videos
Golden retriever



ADD

NMM

DIVISION

File Edit View

```
LHLD 2050
SPHL
LHLD 2052
XCHG
LXI H, 0000H
LXI B, 0000H
AGAIN: DAD SP
JNC START
INX B
START: DCX D
MOV A, E
ORA D
JNZ AGAIN
SHLD 2054
MOV L, C
MOV H,B
SHLD 2055
HLT
```