

COA

8086 MP | Simulate High-level Conditional Statement

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| AGENDA

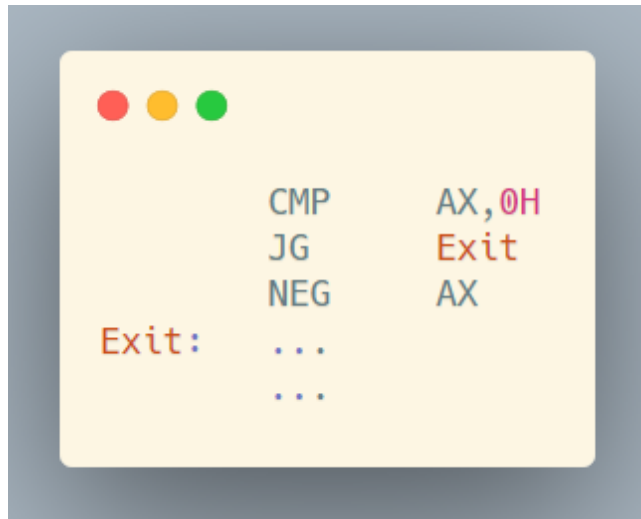
- Simulate IF ... ThenElse... Endif

| Example 01

- Check the number contained in AX register, then replace it with the **absolute value**; $AX = |AX|$

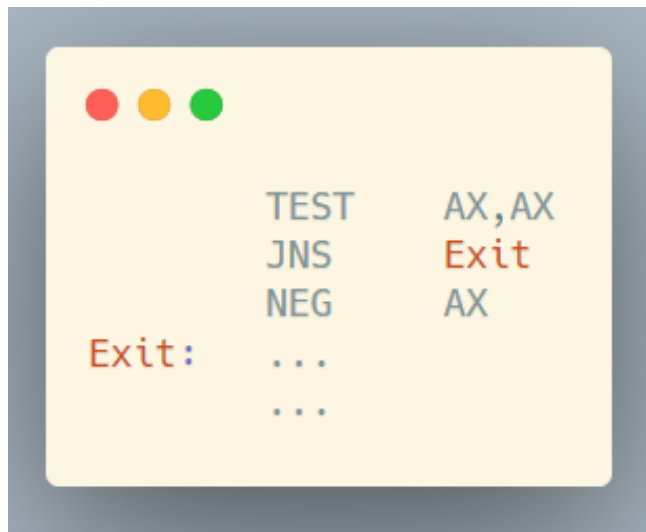
| Example 01

- Check the number contained in AX register, then replace it with the **absolute value**; $AX = |AX|$

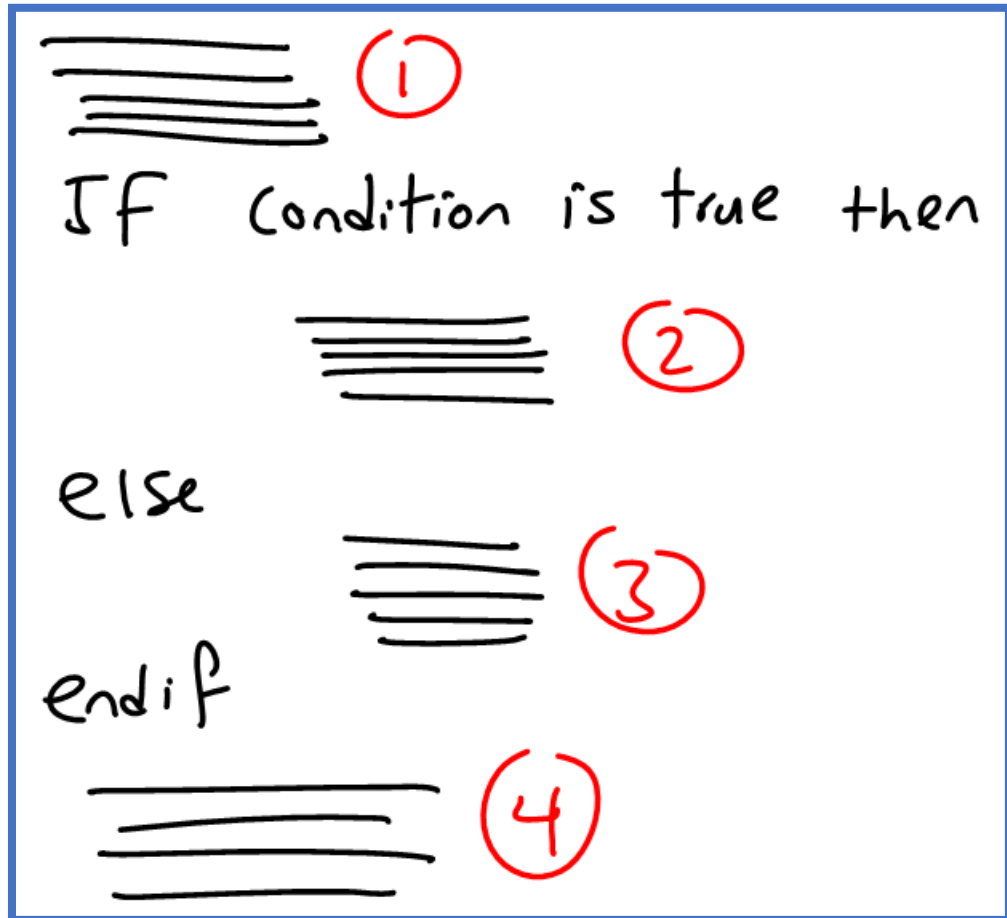


| Example 01

- Check the number contained in AX register, then replace it with the **absolute value**; $AX = |AX|$



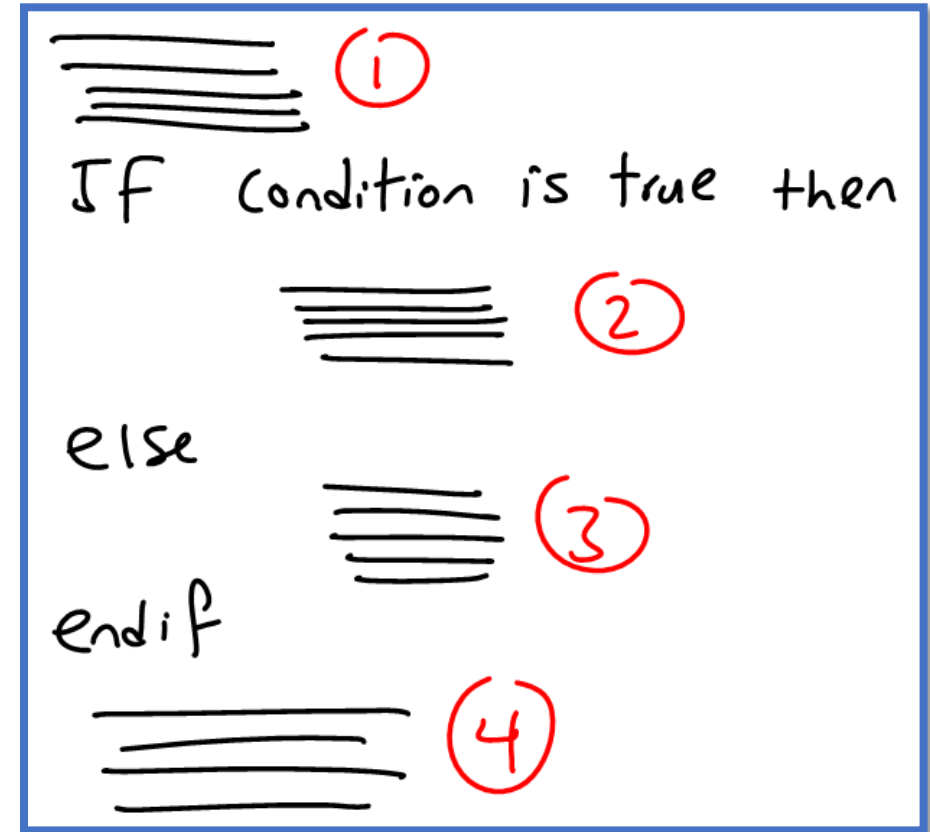
| Simulate IF...Then....ELSE....ENDIF



| Example 02

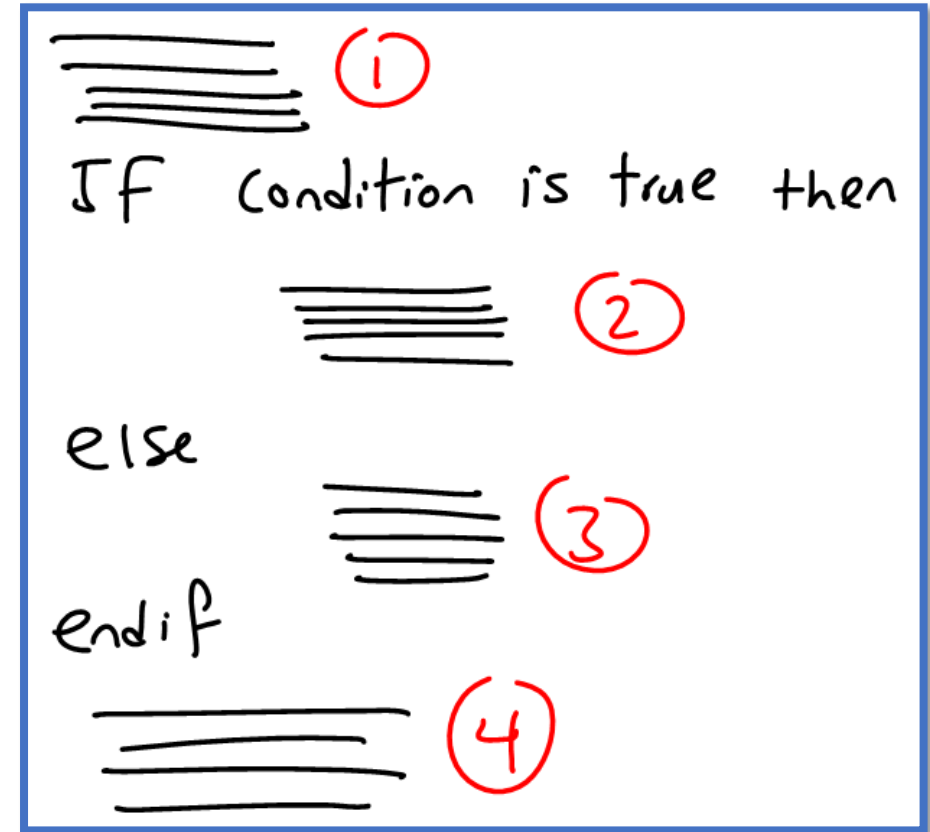
```
CMP     AX,10H
JG      Greater
..... ; less than or equal to
.....
.....

Greater:..... ; Greater then
.....
.....
```



| Example 02

```
CMP     AX,10H
JG      Greater
..... ; less than or equal to
.....
.....
JMP     Exit
Greater:..... ; Greater then
.....
Exit:    .....
```



| Example 03

- Check the number contained in **AX** register, then
 - < 0 : set **BX** to -1
 - = 0 : set **BX** to 0
 - > 0 : set **BX** to 1

| Example 03

```
CMP     AX,0H
JL      Less
JE      Equal
; Greater than
MOV     BX, 1
JMP     Exit
Less:   ; Less than
MOV     BX,-1
JMP     Exit
Equal:  ; Equal
MOV     BX, 0
Exit:   .....
```

```
CMP     AX,0H
JL      Less
JE      Equal
..... ; Greater than
.....
.....
JMP     Exit
Less:   ; Less than
.....
.....
JMP     Exit
Equal:  ; Equal
.....
Exit:   .....
```

| Example 03



```
CMP     AX,0H
JL      Less
JE      Equal
; Greater than
MOV     BX, 1
JMP     Exit
Less:   ; Less than
MOV     BX,-1
JMP     Exit
Equal:  ; Equal
MOV     BX, 0
Exit:   .....
```