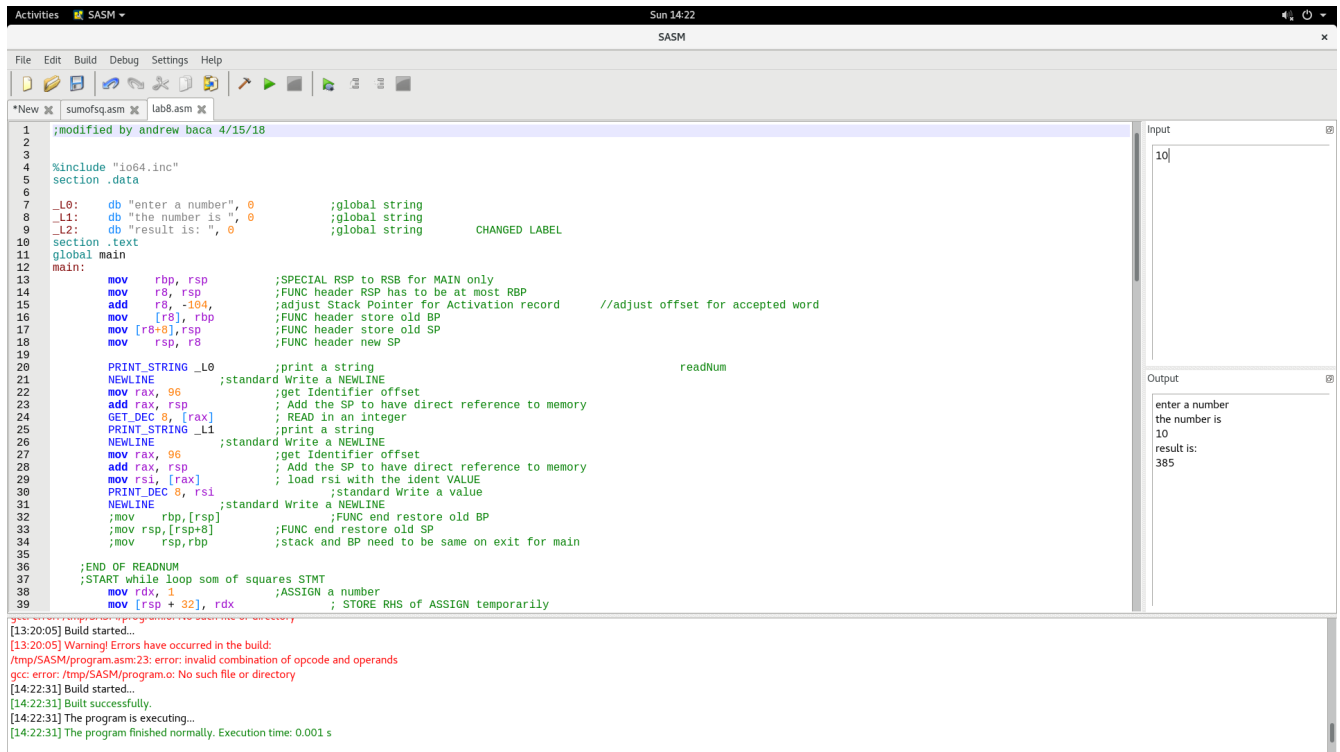


## Andrew baca

### Lab 8 out



The screenshot displays the SASM application window. The main editor shows assembly code for a program that prompts the user to enter a number and calculates its square. The code includes comments in Indonesian and uses standard x86 assembly instructions. The output window on the right shows the program's execution, displaying the prompts and the calculated result (10 squared is 100, but the output shows 385, which is 19 squared, suggesting a discrepancy in the code or output capture).

```
1 ;modified by andrew baca 4/15/18
2
3
4 %include "io64.inc"
5 section .data
6
7 _L0: db "enter a number", 0      ;global string
8 _L1: db "the number is ", 0      ;global string
9 _L2: db "result is: ", 0         ;global string      CHANGED LABEL
10 section .text
11 global main
12 main:
13     mov rbp, rsp                ;SPECIAL RSP to RBP for MAIN only
14     mov r8, rsp                ;FUNC header RSP has to be at most RBP
15     add r8, -104,               ;adjust Stack Pointer for Activation record    //adjust offset for accepted word
16     mov [r8], rbp              ;FUNC header store old BP
17     mov [r8+8], rsp            ;FUNC header store old SP
18     mov rsp, r8                ;FUNC header new SP
19
20     PRINT_STRING _L0           ;print a string                                readNum
21     NEWLINE                   ;standard Write a NEWLINE
22     mov rax, 96                ;get Identifier offset
23     add rax, rsp               ; Add the SP to have direct reference to memory
24     GET_DEC 0, [rax]           ; READ in an integer
25     PRINT_STRING _L1           ;print a string
26     NEWLINE                   ;standard Write a NEWLINE
27     mov rax, 96                ;get Identifier offset
28     add rax, rsp               ; Add the SP to have direct reference to memory
29     mov rsi, [rax]             ; load rsi with the ident VALUE
30     PRINT_DEC 0, rsi           ;standard Write a value
31     NEWLINE                   ;standard Write a NEWLINE
32     ;mov rbp, [rsp]            ;FUNC end restore old BP
33     ;mov rsp, [rsp+8]          ;FUNC end restore old SP
34     ;mov rsp, rbp             ;stack and BP need to be same on exit for main
35
36 ;END OF READNUM
37 ;START while loop som of squares STWT
38     mov rdx, 1                 ;ASSIGN a number
39     mov [rsp + 32], rdx        ; STORE RHS of ASSIGN temporarily
```

Input: 10

Output: enter a number  
the number is  
10  
result is:  
385

[13:20:05] Build started...  
[13:20:05] Warning! Errors have occurred in the build:  
/tmp/SASM/program.asm:23: error: invalid combination of opcode and operands  
gcc: error: /tmp/SASM/program.o: No such file or directory  
[14:22:31] Build started...  
[14:22:31] Built successfully.  
[14:22:31] The program is executing...  
[14:22:31] The program finished normally. Execution time: 0.001 s