Task 1: Installing NASM

To install NASM, take the following steps:

1. Check **The netwide assembler (NASM)** website for the latest version.
2. Download the Linux source archive nasm-X.XX.ta.gz, where X.XX is the NASM version number in the archive.
3. Unpack the archive into a directory which creates a subdirectory nasm-X. XX.
4. cd to *nasm-X. XX* and type **./configure** . This shell script will find the best C compiler to use and set up Makefiles accordingly.
5. Type **make** to build the nasm and ndisasm binaries.
6. Type **make install** to install nasm and ndisasm in /usr/local/bin and to install the man pages.

You may choose other methods. Whatever works…

Task 2: Verify Installation

1. Copy the code given on the next page to a file titled “hello.asm”
2. Run the following command and make sure the program runs perfectly. It should print “a=5, b=2 c=7”. You may change the values of a and b in the source code.

```
nasm -f elf64 hello.asm && gcc -o hello hello.o && ./hello
```

3. End of lab for today.

```
extern     printf
SECTION .data

a:    dq    5
b:    dq    2
c:    dq    0
fmt:     db "a=%ld, b=%ld c=%ld", 10, 0

SECTION .text

global main
main:
        push    rbp

      mov   rax,[a]
      mov   rbx,[b]
      add   rax,rbx
      mov   [c],rax
      mov   rdi,fmt
      mov   rsi,[a]
      mov   rdx,[b]
      mov   rcx,[c]
      mov   rax,0
         call    printf

      pop   rbp

      mov   rax,0
      ret
```