

WINDOW X64 NASM

windows. This code should run on your system.

Assembly Code (`hello.asm`):

```
asm
Copy code


section .data
    hello db 'Hello, World!', 0        ; The string to print

section .text
    global main                        ; The entry point for the program
    extern printf                      ; External function declaration for printf

main:
    sub rsp, 28h                      ; Align the stack for printf
    lea rcx, [hello]                 ; Load the address of the string into rcx
    call printf                       ; Call the printf function
    add rsp, 28h                      ; Clean up the stack
    ret                              ; Return from the function
```

Steps to Assemble, Link, and Run:

1. **Assemble:** Use NASM to assemble the code into an object file:

```
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```


```
nasm -f win64 hello.asm -o hello.obj
```

2. **Link:** Link the object file to create an executable using a linker like ``GoLink`` or ``ld``:

```
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```

```
golink /entry:main /console hello.obj msvcrt.dll
```

Or if using ``ld``:

```
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```
ld hello.obj -o hello.exe -e main -subsystem console -lmsvcrt
```

3. Run: Execute the resulting `hello.exe`:


```
bash
```

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```
hello.exe
```

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This should output:

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```
Hello, World!
```

Explanation:

Filename: Document1
Directory:
Template: C:\Users\Abdullah\AppData\Roaming\Microsoft\Templates\Normal.dot
m
Title:
Subject:
Author: Abdullah
Keywords:
Comments:
Creation Date: 8/13/2024 8:34:00 PM
Change Number: 1
Last Saved On:
Last Saved By:
Total Editing Time: 10 Minutes
Last Printed On: 8/13/2024 8:44:00 PM
As of Last Complete Printing
Number of Pages: 2
Number of Words: 4 (approx.)
Number of Characters: 26 (approx.)