

Editing, Compiling And Executing Code

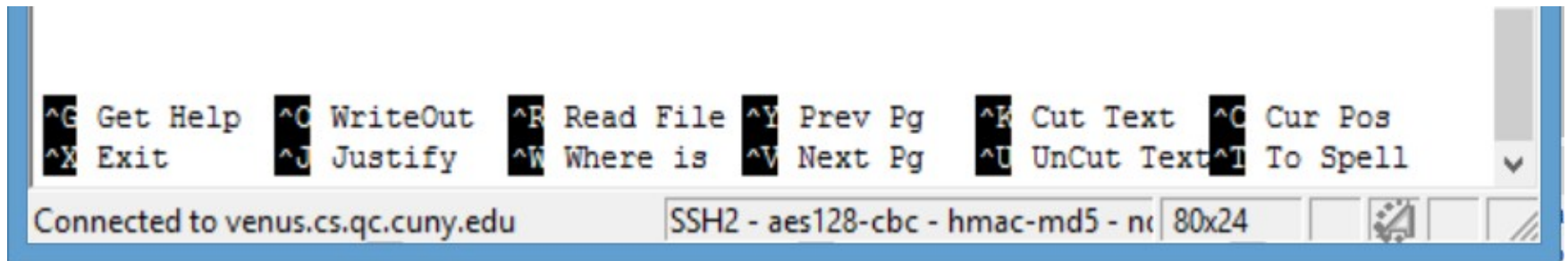
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Editing a C++ file on a Linux Machine

- To edit a file we need to use an editor.
- Notepad is an example of an editor on a windows machine.
- We will use the pico editor on our Linux machine.
 - To launch the pico to edit a file type:
__ `pico <file_name>`
__ *Example:* `pico helloworld.cpp`
- The pico editor creates a file if it doesn't exist.
- It opens the file if the file already exists.

pico basics

- The pico editor has the menu options listed at the bottom
- The caret key ^ means CTRL
- ^O then ENTER to save file



The screenshot shows the bottom portion of a terminal window. The top part is the menu bar, which contains two rows of options: `^G Get Help`, `^O WriteOut`, `^R Read File`, `^Y Prev Pg`, `^K Cut Text`, `^C Cur Pos` in the first row; and `^X Exit`, `^J Justify`, `^W Where is`, `^V Next Pg`, `^U UnCut Text`, `^T To Spell` in the second row. Below the menu bar is the status bar, which displays `Connected to venus.cs.qc.cuny.edu` on the left, `SSH2 - aes128-cbc - hmac-md5 - nc` in the middle, and `80x24` on the right. There are also some small icons on the far right of the status bar.

Exercise

- Type the following c++ code using pico and name it as “hello.cpp”

```
#include <iostream>
using namespace std;
int main() {
    cout << “Hello, my name is <your name>.”;
    cout << “My major is <your major>.” << endl;
    return 0;
}
```

Compile

- To run the program that we have just written, we have to first convert it to the machine language code by using the c++ compiler, g++.
- To compile type:

```
_ g++ <name_of_the_source_code_file.cpp>
```


_Example: g++ hello.cpp
- If the program compiles, there would be no output from the g++ program.
- If you see any output, you have errors in the code.
- You need to fix these errors (debug) and recompile.

Run or Execute

- To run the program, type:
 - ./a.out
- a.out is default executable file of the hello.cpp
- Since we didn't specify the name of the output file at the time of compiling, the system created this default file.
- Once our file compiles and gives us the expected output, then we can compile one last time and include the name of the output file as shown below.
 - To include the name of the executable file use `-o`
 - Example:* `g++ hello.cpp -o hello`
- Now if you type `ls`, you will see the file `hello` in the list. You can run the file by typing `./hello`

Compile and Run Exercise

- Compile and run the program you previously typed up.
 - Use the following commands:

```
g++ hello.cpp  
./a.out
```
- At this point you should see the output:

Hello, my name is Krishna Mahavadi. My major is physics/engineering.