Homework #1

- **Build and Run "Hello World"** *using your own name*
  - **Bonus:** Ask the user for a name and use that
  - **Extreme Bonus:** Determine current user's name *without asking* and use that

- Deliver code and screen shots to Blackboard by **Tuesday, January 22 at 8 am**

- **Details are provided on Blackboard**

  (HINT: These are the easiest points you'll earn all semester. Don't blow it!)

You learn new tech by using it!
NOW is the time to start – when facing a tough C++ issue will be too late

Homework #1 Full Credit
Saying Hello

```cpp
#include <iostream>
 using namespace std;
 int main() {
    cout << "Hello, Professor Rice!" << endl;
 }
```

hello.cpp

```makefile
CXXFLAGS = --std=c++17

hello:
    $(CXX) $(CXXFLAGS) -o hello hello.cpp

clean:
    -rm -f *.o *~ hello
```

Makefile
(NOT required!)

```
File  Edit  Tabs  Help
student@cse1325:/media/sf_dev/CSE1325_01/full_credit$ ls
hello.cpp  Makefile
student@cse1325:/media/sf_dev/CSE1325_01/full_credit$ make
g++ --std=c++17 -o hello hello.cpp
student@cse1325:/media/sf_dev/CSE1325_01/full_credit$ ./hello
Hello, Professor Rice!
student@cse1325:/media/sf_dev/CSE1325_01/full_credit$ scrot -s hello.png
```

hello.png

Bonus

Saying Hello

```cpp
#include <iostream>
using namespace std;
int main() {
  string name;
  cout << "What's your name? ";
  cin >> name; // or getline(cin, name);
  cout << "Hello, " << name << "!" << endl;
}
```

hello.cpp

```
student@cse1325:/media/sf_dev/CSE1325_01/bonus$ ls
hello.cpp  hello_getline.cpp  Makefile
student@cse1325:/media/sf_dev/CSE1325_01/bonus$ make
g++ --std=c++17 -o hello hello.cpp
g++ --std=c++17 -o hello_getline hello_getline.cpp
student@cse1325:/media/sf_dev/CSE1325_01/bonus$ ls
hello  hello.cpp  hello_getline  hello_getline.cpp  Makefile
student@cse1325:/media/sf_dev/CSE1325_01/bonus$ ./hello
What's your name? Prof Rice
Hello, Prof!
student@cse1325:/media/sf_dev/CSE1325_01/bonus$ ./hello_getline
What's your name? Prof Rice
Hello, Prof Rice!
student@cse1325:/media/sf_dev/CSE1325_01/bonus$ ./hello_getline
What's your name? José Paŝtisto 名
Hello, José Paŝtisto 名!
student@cse1325:/media/sf_dev/CSE1325_01/bonus$ # The above were copied and past
ed from the assignment text!
student@cse1325:/media/sf_dev/CSE1325_01/bonus$ scrot -s hello.png
```

hello.png

Extreme Bonus

Saying Hello

```cpp
#include <iostream>
using namespace std;
int main() {
  cout << "Hello, " << getenv("USER")
       << "!" << endl;
}
```

hello.cpp

Adapted from
http://www.cplusplus.com/reference/cstdlib/getenv/

```cpp
#include <iostream>
#include <unistd.h>
#include <pwd.h>
using namespace std;
int main() {
  struct passwd *passwd;
  passwd = getpwuid(getuid());
  cout << "Hello, " << passwd->pw_gecos << endl;
}
```

hello_getuid.cpp

Adapted from
https://forums.fedoraforum.org/archive/index.php/t-207206.html

Other answers may be valid!

```
student@cse1325:/media/sf_dev/CSE1325_01/extreme_bonus$ ls
hello.cpp  hello_getuid.cpp  hello.png  Makefile
student@cse1325:/media/sf_dev/CSE1325_01/extreme_bonus$ make
g++ --std=c++17 -o hello hello.cpp
g++ --std=c++17 -o hello_getuid hello_getuid.cpp
student@cse1325:/media/sf_dev/CSE1325_01/extreme_bonus$ ./hello
Hello, student!
student@cse1325:/media/sf_dev/CSE1325_01/extreme_bonus$ ./hello_getuid
Hello, student,,,
student@cse1325:/media/sf_dev/CSE1325_01/extreme_bonus$ scrot -s hello1.png
```

hello.png

hello1.png
VM with
student account

```
File  Edit  Tabs  Help
student@cse1325:/media/sf_dev/CSE1325_01/extreme_bonus$ sudo adduser tester
Adding user `tester' ...
Adding new group `tester' (1001) ...
Adding new user `tester' (1001) with group `tester' ...
Creating home directory `/home/tester' ...
Copying files from `/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for tester
Enter the new value, or press ENTER for the default
        Full Name []: George F. Rice
        Room Number []: ERB 402
        Work Phone []:
        Home Phone []:
        Other []:
Is the information correct? [Y/n]
student@cse1325:/media/sf_dev/CSE1325_01/extreme_bonus$ cd ..
student@cse1325:/media/sf_dev/CSE1325_01$ cp -r extreme_bonus/ /home/student/Doc
uments/Examples/hello/
student@cse1325:/media/sf_dev/CSE1325_01$ su - tester
Password:
tester@cse1325:~$ cd /home/student/Documents/Examples/hello/extreme_bonus/
tester@cse1325:/home/student/Documents/Examples/hello/extreme_bonus$ ls
hello  hello.cpp  hello_getuid  hello_getuid.cpp  hello.png  Makefile
tester@cse1325:/home/student/Documents/Examples/hello/extreme_bonus$ ./hello
Hello, tester!
tester@cse1325:/home/student/Documents/Examples/hello/extreme_bonus$ ./hello_get
uid
Hello, George F. Rice,ERB 402,,
tester@cse1325:/home/student/Documents/Examples/hello/extreme_bonus$ exit
logout
student@cse1325:/media/sf_dev/CSE1325_01$ scrot -s hello2.png
```

hello2.png
VM with
tester account

Homework #1 Extreme_Bonus
Saying Hello

```
ricegf@pluto:~/dev/cpp/201901/CSE1325_01/extreme_bonus$ ./hello
Hello, ricegf!
ricegf@pluto:~/dev/cpp/201901/CSE1325_01/extreme_bonus$ ./hello_getuid
Hello, George F. Rice,,,
ricegf@pluto:~/dev/cpp/201901/CSE1325_01/extreme_bonus$
```

**hello3.png
Mint desktop**

```
ricegf@saturn:~/Documents/201901/dev/CSE1325_01/extreme_bonus$ ./hello
Hello, ricegf!
ricegf@saturn:~/Documents/201901/dev/CSE1325_01/extreme_bonus$ ./hello_
getuid
Hello, George F. Rice,,,
ricegf@saturn:~/Documents/201901/dev/CSE1325_01/extreme_bonus$
```

**hello4.png
Ubuntu desktop**