

Engineering 101– W05

Lecture 2

Mark Brehob

E-mail questions I got

- Make-up exams
 - Are on the following Saturday at 9:30am
 - Contact Wanda Dobberstein
<wldobber@engin.umich.edu>
- Same person as above for overrides.
- Last time I mentioned “cygwin”
 - You can get it from “www.cygwin.com”.
 - It isn’t hard to install, but it is a bit difficult to get working

More questions

- Working from “home”
 - Not an easy thing.
 - CAEN should be able to help
 - “putty” (type that word into Google) may be useful
 - But you can’t use the debugger or nedit
 - Good excuse to learn *vi* or *Emacs* ☺
- Also:
 - Changed directory name to use in handout from “Eng101” to “101”.
 - You can use either.

Announcements

- Everything here is on the webpage
 - So don’t feel obligated to copy it all down. I’m just telling you here to give you a feeling about stuff.
 - The webpage is:
<http://www.eecs.umich.edu/courses/engin101/>

Office hours (may be Michigan time)

Monday

11:00-1:00 Nadine

6:30-8:30 Alina (CENTRAL)

Tuesday

11:30-1:30 Paul

2:30-4:30 Doug

4:30-6:30 Irene

Wednesday

12:30-2:30 Alina

2:30-4:30 Nadine (CENTRAL)

Thursday

11:30-1:30 Paul

4:30-6:30 Irene

Friday

12:30-2:30 Doug

4:00-6:00 Brad

Sunday

3:00-5:00 Brad

Offices:

- Default is B519 Pierpont
- CENTRAL is TBA

My office hours

- Location
 - EECS 2220
- Times:
 - Monday 3:15-4:30 (will end promptly at 4:30)
 - Thursday 2:30-4:30
 - Friday 1:30-3:30
- Also:
 - In the lobby after each class *other than the Friday at 10:30 lecture. I have a meeting at 11:30...*
- So I'm available around 8 hours a week!

Ask me about:

- Class questions
- Project questions
- Homework questions
- Other (folks with questions about the class have priority)
 - Major issues (I know a lot about the different EECS majors)
 - Advising questions (mainly EECS folks, but general questions I can help anyone)

Ask the GSIs about

- Lab and in-lab questions
- Project questions
- They should also be able to help with:
 - Homework
 - Exam questions
 - Etc.

Last of the announcements

- HW1
 - You should be able to do #1
 - #2 and #3 you probably can't start until after Monday.
 - Remember due date is now Thursday at noon.

Review

- Last time:
 - Assign values
 - Doubles/ints
 - Output (cout)
 - A bit about “if/else” statements

```
#include<iostream>
using namespace std;
main()
{
    int i;
    int j;
    double k;

    i=1;
    j=2;
    k=5.0;

    if(i*2>j)
        k=1.0;
    else
        j=3;

    if(k<2)
        k=4.0;

    cout << "i= " << i << endl;
    cout << "k= " << k << endl;
    cout << "j= " << j << endl;
}
```

ex0.cc

Comments

- Notice the way the code is indented
 - We indent to indicate what goes with what.
 - Indentation is only for humans
 - It doesn't change the behavior of the code!
 - It does make it more readable.
- Also note that the if or else only applies to the line that follows.

```
#include<iostream>
using namespace std;
```

ex0b.cc

```
main()
{
    int i;
    int j;
    double k;

    i=1;
    j=2;
    k=5.0;

    i=i+3;
    k=k/j;
    j=(k+1)+3/2;

    cout << "i= " << i << endl;
    cout << "k= " << k << endl;
    cout << "j= " << j << endl;
}
```

```
#include<iostream>
using namespace std;
```

ex1.cc

```
main()
{
    int i;
    int j;

    i=0;
    j=0;

    while(i<4)
    {
        j=j+i;
        i=i+1;
    }
    cout << "j= " << j << endl;
    cout << "i= " << i << endl;
}
```

Comments on ex1.cc

- Notice that we used { } for the while loop
 - Without them the while applies to only one line.
- Notice that the indentation is still helping us to read the code.

```
#include<iostream>
using namespace std;
```

```
main()
{
    int i; int j;
    i=0; j=0;
    while(i<4){ j=j+i;
    i=i+1;}
    cout << "j= " << j << endl;
    cout << "i= " << i << endl;
}
```

This is the same as ex1.cc. But it is a lot harder to read.
As programs get more complex, good formatting makes it much easier to read.

ex2.cc

```
#include<iostream>
using namespace std;

main()
{
    int i=0;
    int j=0;
    double k=1.2;

    while(i<4)
    {
        if(i>2)
        {
            j=j+i;
            k=k+j;
        }
        i=i+1;
    }
    cout << "j= " << j << endl;
    cout << "i= " << i << endl;
    cout << "k= " << k << endl;
}
```

ex3.cc

```
#include<iostream>
using namespace std;

main()
{
    int count, i=0, total=0;

    cin >> count;

    while(i<count)
    {
        total=total+i;
        i=i+1;
    }

    cout << "total= " << total << endl;
    cout << "i= " << i << endl;
}
```