CP LAB- BSCS – FALL 2017

Practice sample pogroms to run by students

/* This program prompts the user for the current year, the user's current age, and another year. It then calculates the age that the user was or will be in the second year entered. */

```
#include <iostream>

using namespace std;

int main()
{
        int year_now, age_now, another_year, another_age;

        cout << "Enter the current year then press RETURN.\n";
        cin >> year_now;

        cout << "Enter your current age in years.\n";
        cin >> age_now;

        cout << "Enter the year for which you wish to know your age.\n";
        cin >> another_year;

        another_age = another_year - (year_now - age_now);

        if (another_age >= 0) {
                cout << "Your age in " << another_year << ": ";
                cout << another_age << "\n";
        } else {
                cout << "You weren't even born in ";
                cout << another_year << "!\n";
        }

        return 0;
}
```

Very Simple Input, Output and Assignment

After we have compiled the program above, we can run it. The result will be something like

```
Enter current year then press RETURN.
1996
Enter your current age in years.
36
Enter the year for which you wish to know your age.
2001
Your age in 2001: 41
```

Simple Flow of Control

The last few lines of our example program (other than "return 0") are:

```
if (another_age >= 0) {

            cout << "Your age in " << another_year << ": ";

            cout << another_age << "\n";

}

else {

            cout << "You weren't even born in ";

            cout << another_year << "!\n";

}
```

The "if ... else ..." branching mechanism is a familiar construct in many procedural programming languages. In C++, it is simply called an *if statement*, and the general syntax is

```
if (condition) {

            Statement1;

            ...

            ...

            StatementN;

} else {

            StatementN+1;

            ...

            ...

            StatementN+M;}
```

The "else" part of an "if statement" may be omitted, and furthermore, if there is just one *Statement* after the "if (condition)", it may be simply written as

```
            if (condition)

                        Statement;
```

OPERATORS

Symbol	Operation	Example	Value
+	Addition	3 + 5	8
-	Subtraction	43 - 25	18
*	Multiplication	4 * 7	28
/	Division	9 / 2	4
%	Modulus	20 % 6	2

(Notice that when the division sign "/" is used with two integers, it returns an integer.) You may also want to use the following comparison operators:

Symbol	Meaning	Example	Value
<	less than	3 < 5	TRUE
<=	less than or equal to	43 <= 25	FALSE
>	greater than	4 > 7	FALSE
>=	greater than or equal to	9 >= 2	TRUE
==	equal to	20 == 6	FALSE
!=	not equal to	20 != 6	TRUE