

Operators Precedence

()
float() int() sizeof() !
 * / %
 + -
 << >>
 < <= > >=
 == !=
 =

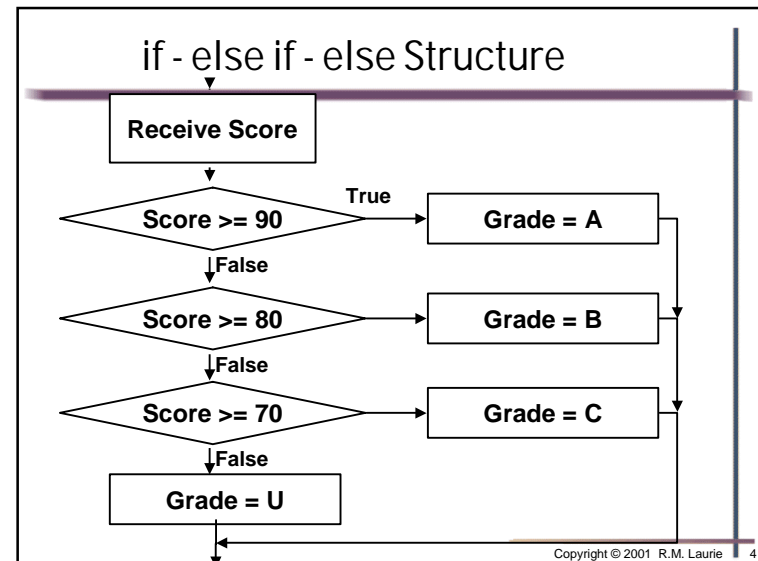
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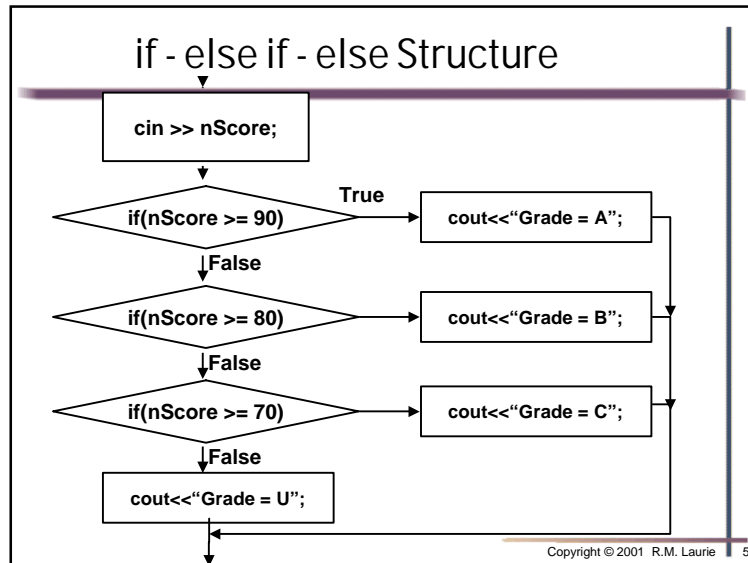
The Code

```

#include <iostream.h>
int main()
{
    float fCost, fFee;
    cout << "What was the cost of the building?\n>$";
    cin >> fCost;
    if(fCost <= 5000)
        fFee = fCost * 0.08;
    else
    {
        if(fCost <= 85000)
            fFee = 400+(fCost-5000)*0.03;
        else
            fFee = 400+(fCost-5000)*0.025;
    }
    cout << "Your fee = $" << fFee << endl;
    return 0;
}
    
```

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if - else if - else Structure

(Single statement syntax)

```

cin >> nScore;
if(nScore >= 90)
    cout << "Grade = A";
else if(nScore >= 80)
    cout << "Grade = B";
else if(nScore >= 70)
    cout << "Grade = C";
else
    cout << "Grade = U";
  
```

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The Code (if-else if-else)

```

#include <iostream.h>
int main()
{
    float fCost, fFee;
    cout << "What was the cost of the building?\n>$";
    cin >> fCost;
    if(fCost <= 5000)
        fFee = fCost * 0.08;
    else if(fCost <= 85000)
        fFee = 400+(fCost-5000)*0.03;
    else
        fFee = 400+(fCost-5000)*0.025;
    cout << "Your fee = $" << fFee <<endl;
    return 0;
}
  
```

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Logical Operators

- There are three logical operators
 - AND &&
 - OR ||
 - NOT !

nA	!nA
F	T
T	F

nA	nB	nA&& nB	nA	nB	nA nB
F	F	F	0	0	0
F	T	F	0	1	1
T	F	F	1	0	1
T	T	T	1	1	1

Note Precedence as shown on page A1.
Evaluate Relational first and then Logical

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Operators Precedence

```
( )
float() int() sizeof() !
* / %
+ -
<< >>
< <= > >=
== !=
&&
||
=
```

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Operator Examples

- if(nA==nB && nA==nC) cout << "same";
- !(nA || nB)
- !nA && !nB
- nA <= nB || nC == nD
- nA = nB == 0;
- if(nA!=0) cout << "Non Zero";
- if(nA=0) cout << "Zero"; // Error use ==
- if(cQuestion == 'C' || cQuestion == 'c')
- lnSSN>999999999 || lnSSN<100000000
- fTax==0 || fTax==15 || fTax==28

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Temperature Program -Ver.2

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

int main(void)
{
    // DECLARATION SECTION
    char cQuestion;
    float fTemperature;

    // PROCESSING SECTION
    cout << "This program converts temperatures between\n"
         << "degrees Celsius and degrees Fahrenheit.\n"
         << "You may enter either a Celsius or "
         << "Fahrenheit\ntemperature for conversion.\n\n";
    cout << "> <-- Enter C (Celsius) or F (Fahrenheit)\r>";
```

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Temperature Program -Ver.2

```
cin.get(cQuestion);
cin.ignore(100,'\n');
cout << fixed << showpoint << setprecision(2);

if(cQuestion == 'C' || cQuestion == 'c')
{
    cout << "          <-- Enter temperature in degrees
          Celsius\r>";
    cin >> fTemperature;
    cin.ignore(100,'\n');
    cout << "Results: " << setprecision(2)
         << fTemperature << " C = "
         << (((fTemperature * 180) / 100) + 32) << "
          F\n";
}
```

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Temperature Program -Ver.2

```
else if(cQuestion == 'F' || cQuestion == 'f')
{
    cout << "        <-- Enter temperature in degrees
        Fahrenheit\r>";
    cin >> fTemperature;
    cin.ignore(100, '\n');
    cout << "Results: " << setw(6)
        << fTemperature << " F = " << setw(6)
        << (((fTemperature - 32) * 100) / 180) << "
        C\n";
}
return 0;
}
```

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Temperature Program -Ver.2

This program converts temperatures between degrees Celsius and degrees Fahrenheit. You may enter either a Celsius or Fahrenheit temperature for conversion.

```
>c<-- Enter C (Celsius) or F (Fahrenheit)
>67    <-- Enter temperature in degrees Celsius
Results: 67.00 C = 152.60 F
```

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