

MA122 - Computer Programming and Applications

Indian Institute of Space Science and Technology

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Lecture 10

MA122 -
Computer
Programming
and
Applications

if else
statement

|| and &&
operators

1 if else statement

2 || and && operators

```
statement1  
if (test_expr)  
    statement2  
else  
    statement3  
statement4
```

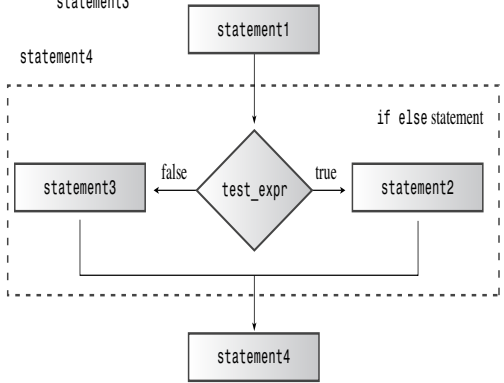


Figure 6.2 The structure of if else statements.

if else

```
1 // ifelse.cpp -- using the if else statement
2 #include <iostream>
3 int main()
4 {
5     char ch;
6     std::cout << "Type, and I shall repeat.\n";
7     std::cin.get(ch);
8     while (ch != '.')
9     {
10        if (ch == '\n')
11            std::cout << ch;    // done if newline
12        else
13            std::cout << ch++; // done otherwise
14        //std::cin.get(ch);
15    }
16
17    return 0;
18 }
```

if else

```
1 // ifelse.cpp -- using the if else statement
2 #include <iostream>
3 int main()
4 {
5     char ch;
6     std::cout << "Type, and I shall repeat.\n";
7     std::cin.get(ch);
8     while (ch != '.')
9     {
10        if (ch == '\n')
11            std::cout << ch;    // done if newline
12        else
13            std::cout <<ch++; // done otherwise
14        std::cin.get(ch);
15    }
16    return 0;
17 }
```

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Table 6.1 The || Operator

| <i>The Value of</i> expr1 expr2 | | |
|---|---------------|----------------|
| | expr1 == true | expr1 == false |
| expr2 == true | true | true |
| expr2 == false | true | false |

Table 6.2 **The && Operator**

| <i>The Value of</i> expr1 && expr2 | | |
|------------------------------------|---------------|----------------|
| | expr1 == true | expr1 == false |
| expr2 == true | true | false |
| expr2 == false | false | false |

OR operator

```
1 // or.cpp -- using the logical OR operator
2 #include <iostream>
3 int main()
4 {
5     using namespace std;
6     cout << "This program may reformat your hard disk\n"
7     "and destroy all your data.\n"
8     "Do you wish to continue? <y/n> ";
9     char ch;
10    cin >> ch;
11    if (ch == 'y' || ch == 'Y')           // y or Y
12        cout << "You were warned!\a\a\n";
13    else if (ch == 'n' || ch == 'N')     // n or N
14        cout << "A wise choice ... bye\n";
15    else
16        cout << "That wasn't a y or n! Apparently you "
17        "can't follow\ninstructions";
18    return 0; }
```

AND operator

```
1 // and.cpp -- using the logical AND operator
2 #include <iostream>
3 const int ArSize = 6;
4 int main()
5 {
6     using namespace std;
7     float naaq[ArSize];
8     cout << "Enter the NAAQs (New Age Awareness
9         Quotients) "
10    << "\n" << "of\nyour neighbors. Program terminates "
11    << "when you make\n" << ArSize << " entries "
12    << "or enter a negative value.\n";
13
14    int i = 0;
15    float temp;
16    cout << "First value: ";
17    cin >> temp;
```

AND operator

```
1  while (i < ArSize && temp >= 0) // 2 quitting
   criteria
2  {
3      naaq[i] = temp;
4      ++i;
5      if (i < ArSize)           // room left in the array
        ,
6      {
7          cout << "Next value: ";
8          cin >>temp;           // so get next value
9      }
10 }
11 if (i == 0)
12     cout << "No data--bye\n";
13 else
14     {
15         cout << "Enter your NAAQ: ";
16         float you;
```

AND operator

```
1   cin >> you;
2   int count = 0;
3
4   for (int j = 0; j < i; j++)
5       if (naaq[j] > you)
6           ++count;
7
8   cout << count;
9
10  cout << " of your neighbors have greater awareness
    of\n"
11  << "the New Age than you do.\n";
12  }
13  return 0;
14  }
```