

More Loops

A boolean condition is an expression that evaluates to either true or false.

The most common is a comparison of two values using a relational operator: these are

< <= > >= == !=

Note that a=b is an assignment that means assign the value of b to a.

a==b is a formula that is true if a & b are equal and false otherwise

A while loop is used to repeat a block of code until something happens:

```
while ( continuation_condition )
{
    body
}
```

Usually, there is some initialization part before the loop, and some update inside the loop. (Indeed, often the "initialization" and "update" code are similar.)

For example: code to print out the numbers from 1 up to 10

```
int count = 1;
while(count<=10 ) {
    printf("%d", count);
    count++;
}
```

Note that the "index variable" has a value after the loop.

For example, here is code to find the biggest perfect square less than 60:

```
int x = 0;
while( x*x < 60 ) {
    x = x+1;
}
x = x-1;
printf("%d", x*x );
```

