1. Create a program that will determine the grade of a given value. The user will enter a number between 1 and 100, and the console should spit out the grade. e.g. If I were to enter 89, the console would tell me 'B'. The value you get from the user should be of type int.
2. Most likely when you write programs, you want the user to continually enter data. This is when the while loop comes in handy. A while loop works the same way as an if statement.

int x = 0;

while (x < 10)

{

cout << x << endl;

}

1. Is there something wrong with his block of code? Run and compile a program to show the output. Is there any way to fix this? Attempt to fit the problem above.

This is when the incrementing operator, or ++ comes in handy. A way we can fix the above code is by simple incrementation.

int x = 0;

while(x < 10)

{

cout << x << endl;

x++;

}

b. Implement the while in problem 1 (user controlled loop). The objective is to continually ask the user for a number. The code should all be contained within the while loop. One thing to note is that “x < 10” is a boolean value. If it returns true, then the while loop continues, else, the while loop ends. The same goes for if-else, do..while, while, and for loops.

However, sometimes we actually want the program to end after a certain amount. This is where the for loop comes into play. The syntax of the for loop is:

for(int i = 0; i < 10; i++)

{

// What you want

}

1. Using the for loop, create a program that will take in 10 values from the user, outputting all 10 values as they are received.
2. Using the general idea in the first problem, write a program that will let the user enter a grade, and the program will output what number they should expect with that grade. e.g. If I were to enter C-, the computer will tell me “70-73”. Use the following list as a grading scale. Assume that the user will only enter numbers the grades ranging from B- to A+.

Use this grading scale:

A+ = 100+

A = 93-100

A- = 90-92.9

B+ = 87-89.9

B = 83-86.9

B- = 80 – 82.9

You may do the other grades if you like.