University of Massachusetts Dartmouth
Department of Electrical and Computer Engineering

ECE 160 Name: `convchart.cpp`
Project 4 Due: see `http://ece160.org`

Write a program that will produce a chart showing equivalent miles/hour, rods/min, furlongs/fortnight, and Smoots/second. The chart must have appropriately labeled column headings, and the right most digit of each value must be in columns 18, 36, 54, and 72 respectively. All values should be printed to 4 decimal places. The program must prompt the user to enter an initial value, and accept an initial value. Next the program must prompt the user to enter the final value and accept a final value. Finally, the program must prompt the user to enter an increment, and accept an increment value. The program must then print a table with appropriate column headings. Once the table is complete, the program should prompt the user for another set of input values in the same way. This should continue until the user enters 0 for increment. Some sample runs are shown below (user input is underlined).

```
Enter initial value:  150.0
Enter final value:    190.0
Enter increment value:5.0
          miles/hr          rods/min    frlngs/frtnght       Smoots/sec
          150.0000          800.0000       403200.0000          39.4030
          155.0000          826.6667       416640.0000          40.7164
          160.0000          853.3333       430080.0000          42.0299
          165.0000          880.0000       443520.0000          43.3433
          170.0000          906.6667       456960.0000          44.6567
          175.0000          933.3333       470400.0000          45.9701
          180.0000          960.0000       483840.0000          47.2836
          185.0000          986.6667       497280.0000          48.5970
          190.0000         1013.3333       510720.0000          49.9104
Enter initial value:  0.0
Enter final value:    4.0
Enter increment value:0.25
          miles/hr          rods/min    frlngs/frtnght       Smoots/sec
            0.0000            0.0000            0.0000           0.0000
            0.2500            1.3333          672.0000           0.0657
            0.5000            2.6667         1344.0000           0.1313
            0.7500            4.0000         2016.0000           0.1970
            1.0000            5.3333         2688.0000           0.2627
            1.2500            6.6667         3360.0000           0.3284
            1.5000            8.0000         4032.0000           0.3940
            1.7500            9.3333         4704.0000           0.4597
            2.0000           10.6667         5376.0000           0.5254
            2.2500           12.0000         6048.0000           0.5910
            2.5000           13.3333         6720.0000           0.6567
            2.7500           14.6667         7392.0000           0.7224
            3.0000           16.0000         8064.0000           0.7881
            3.2500           17.3333         8736.0000           0.8537
            3.5000           18.6667         9408.0000           0.9194
            3.7500           20.0000        10080.0000           0.9851
            4.0000           21.3333        10752.0000           1.0507
Enter initial value:  0.0
Enter final value:    0.0
Enter increment value:0.0
Press any key to continue . . .
```

Remember to include the required certification found at the end of the Grading Rubric. Also, check the rubric before handing in your project to insure you haven't made any obvious errors that result in loss of points.