

CS 210
Assignment 2
Speed of sound

September 1, 2016
Due: September 8, 2016

Reminder: This is a programming project, and work on this assignment should be done individually. Assistance from other students is limited to questions about specific issues as noted in the syllabus.

The speed of sound in air at sea level is given by: $a = 21.92 * \sqrt{5 * T + 2297.9}$
In this equation T is the temperature in degrees Fahrenheit and a is the speed of sound in feet/second.

Write a program to use this equation to compute and display the speed of sound using a user input value for temperature. Your program must have the following functions:

`Help()` – This function has no arguments and returns no values. It prints a short paragraph explaining how to use the program.

`GetTemperature()` – this function has no arguments but it returns a double which is the temperature. Your function should print a prompt, get the input, return that input to the user as a double.

`PrintFeetPerSecond(double a)` – this function has a single argument which is a double. It prints this argument along with an appropriate message and formatting. The function returns nothing.

`PrintMilesPerHour(double a)` – this function has a single argument which is a double. It converts this argument from ft/sec to miles per hour and prints the result along with an appropriate message and formatting. The function returns nothing.

Before turning your project in you should develop your own test data using a calculator or a program like MATLAB[®] and use this data to verify that your project works.

After you get your program running correctly, right click on the *project folder* and choose Send To → Compressed zip file. Rename the compressed zip file as `Asn02XXX.zip` where XXX are you three initials. Upload the renamed file to

<\\cecsfp01\users\everyone\cs210>.