C++ Programming Test #2

On your honor, do your own work. You may only use your allowed single page of personal notes for reference, do not use any other source of reference or help. You may NOT access notes or other sources of help on your computer or from any other source. Put away all other papers and electronic devices in the front of the room. KEEP YOUR EYES ON YOUR OWN computer and work. Any violation of these rules will result in a zero on the exam and the possibility of being reported to the Dean of Engineering and Dean of Students for further disciplinary action. Be honest and do your own work.

Problem

Write a C++ program and follow good design conventions. You only have 90 minutes to complete this program, test it (allow time for this step).

Email your code to gpillar@newhaven.edu (file name: yourLastNamename test#2.cpp) (Text File)

Your assignment is a **Jewelry Store System.**

Write a C++ program to accomplish the following requirements:

a. Start with a welcome message including your name and the name of your assignment, Jewelry Store

b. Use the data in the text file ("jewels.txt ") for input. If you cannot make this work, you can use console input instead, with a deduction. **To be eligible for a grade of A or higher,** you must read the text file.

c. Your output should go to the console and a text file (output.txt). If you only send to the console, there is a deduction. **To be eligible for a grade of A or higher**, you must send the output to a text file as well as the console.

d. You must use an array of messages to manage some of the output text.

For example, you can use strings to manage the description of each kind of jewel or metal or to indicate that there was an invalid input.

e. The system calculates the price of the item based on the gem, metal and carat weight.   Diamond ($5000 for each carat), ruby ($8000 for each carat), or opal ($3000 for each carat) jewels. The price per carat is double at 2.0 carats and above. Metal price per item is gold ($1500), platinum ($3000) or silver ($250).

f. The file contains the jewel type, the metal type and the carat weight (real number) in that order.
   - read the data from the file and calculate the price of the jewelry.
   - output the jewelry description and price to the console.
   - print an error message when an invalid data is read and continue processing the file.

g. Output the results of each calculation to the console in a neatly labeled table or a clear sentence.
   For this data: ruby gold 2.5, your program could output this:
   Your jewelry will be gold metal with a 2.5 carat Ruby and the price is $41,500.00.

h. At the end of the output you will need to show the clearly labeled grand total. Calculate and display the total count and price for all of the jewelry at the bottom of your output. e.g. Totals: 25 pieces of jewelry for $1,500,000.00.

i. Don't forget to output a message to the console showing that the program ended normally.

Data File: **jewels.txt**