**Practical exam 01: 120 minutes**

1. (3 points) Write a program that repeatedly prompts a user for numbers until the user enters a positive interger number. Once a valid number is entered, the program converts the number into a hexadecimal number and print out the result. If the user enters anything other than a valid number catch it with a try/except and put out an appropriate message and ignore the number. For example, enter -1, bob and 10 and match the output below.

Enter a positive integer number: -1

The number must be positive.

Enter a positive integer number: bob

The number must be a positive number.

Enter a positive integer number: 125

125 is converted into hexadecimal: 7D

2. (3 points) An ordered word is a word in which the alphabets in the word appear in the alphabetical order. For Example, aam and aals are ordered words while abacus is not an ordered word. Write a program to read through the file “words.txt” and print the ordered words. For example, enter a file name “words.txt” or leave it blank and match the output below.

Enter file: words.txt

The ordered words:

['for', 'You', 'for', 'best', 'box']

3. (4 points) Write a program to manage wage of lecturers including lecturers’name, teaching hours, rate, total and tax. The program reads data from the file “Database.txt” and save to the database file Wage.sqlite using the following table schema.

Wage (Name, Hours, Rate, Total, Tax)

Where:

Total = Hours \* Rate

Tax = Total \* 10% if Total >=2000000, otherwise, Tax = 0.

The program prints the lecturer list whose teaching hours > 5 and sorted in ascending order by Hours. The output should be as follows:

Lecturer list:

Name Hours Rate Total Tax

Anh 6.0 210000.0 1260000.0 0.0

Hoang 15.0 250000.0 3750000.0 375000.0

Hue 30.0 210000.0 6300000.0 630000.0

Lan 10.0 210000.0 2100000.0 210000.0

Tuan 20.0 250000.0 5000000.0 500000.0