Python 3 - Exercises

Exercise 1

Write a program that will display the following text on the screen.

> Python is an easy to learn, powerful programming language. It has efficient high-level data structures and a simple but effective approach.

source: https://docs.python.org/3/tutorial/index.html

Exercise 2

Write a program that allows a person to personalize is employee tag atb FOO BAR.

```
************************************************************
FOO BAR
************************************************************
Name:
Departement:
************************************************************
```

1. Ask the user to enter the information.
2. Display the tag to the user.
3. Make sure you correct anything typed in with incorrect case. (Ex: john doe should be John Doe).

Exercise 3

Write a C program that convert a temperature from Fahrenheit to Centigrade. The conversion is done with the following formula:

```
C = (5/9) * (F - 32)
```

1. Ask the user to enter the Fahrenheit temperature.
2. Display the answer to the user.
3. Confirm the calculation using the following formula:

```
F = ((9.0 / 5.0) * C) + 32.0;
```

Exercise 4

Calculate the discount on a putchase following the rules:

- purchases over 50 euros have a discount of 10%
- purchases over 25 euros have a discount of 10%
- purchases bellow 25 euros have no discount

Example:

```
Purchase value: 110.1
```

```
Discount (10.0%): 11.01
Purchase w/ discount: 110.0
```

1. Ask the user to enter the purchase value.
2. Display the answer to the user (as in the example).

Exercise 5

Calculate the shipping costs following the rules:

- if the purchase is made from Portugal Continental no shipping costs are charged.
- if the purchase is made from Portugal:
    - Continental no shipping costs are charged.
    - Azores or Madeira: 5 euros
- if the purchase is made from an european country and the purchase value is higher than 50 euros:
    - 15 euros
- others:
    - 25 euros

Example:

```
Purchase value? 150
Where are you from? portugal
Are you from Azores or Madeira? [Y/N] y
Purchase value: 150.0
Shipping: 5
Purchase w/ shipping: 155.0
```

1. Ask user for the required information.
2. Display the answer to the user (as in the example).

Exercise 6

Ask the user to enter the names of all the student in the classroom. Then return the list in alphabetical order.

Example:

```
Student name [empty to quit]: student1
Student name [empty to quit]: student3
Student name [empty to quit]: student2
Student name [empty to quit]:

Students:
student1
student2
student3
```

Exercise 7

Create the CSV file with the information presented below :

```
Year,Make,Model,Description,Price
1997,Ford,E350,"ac, abs, moon",3000.00
```

```
1999,Chevy,"Venture ""Extended Edition""","",4900.00
1999,Chevy,"Venture ""Extended Edition, Very Large""",,5000.00
1996,Jeep,Grand Cherokee,"MUST SELL! air, moon roof, loaded",4799.00
```

source: https://en.wikipedia.org/wiki/Comma-separated_values

Exercise 8

Using the cvs module read the previous csv data file an display the values.

Exercise 9

Create a function to append a text in a file with two parameters (text and filename)

1. Ask user to specify the file name and text.
2. Use your function to append in the file a new line the text.

Exercise 10

Create a function to read the text of a file (given as a parameter).

1. Ask user to specify the file.
2. Use your function to display the file content.
3. Add error handling if the file is not found.

Exercise 11

1. Ask the teacher to enter the ending for the session.
2. Display the time left considering the system clock.

Example:

```
Insert ending time [%H:%M]: 17:00
Current:  14:17:00
Time left:  2:43:00
```