UNIV199 Introduction to Programming with Python
Homework #6

Due: May 17, 2023, Wednesday, 23:59.

Strings: *Cappadocia Trip*

Consider an imaginary university that is organizing an official trip to Cappadocia for the members of the university. To ensure maximum participation, it is suggested that the amount to be paid by everyone should be based on their designation and duration of service at the university. The lower the designation or duration of service, the less would be the payable amount and vice versa. The amount should be paid as per under given table:

	Start Date		
	Before 2010	2010 - 2020	After 2020
Dean	**$ 450**	**$ 400**	**$ 350**
Professor	**$ 400**	**$ 350**	**$ 300**
Student	**$ 200** (standard for all)		
Staff	**$ 250** (standard for all)		

To calculate the payable amount and present the data for each user in a standard format, a python code is to be written which should have three functions:

main (): When the code is executed, the main function should ask the user whether he/she wants to calculate the payable amount. If the user's answer starts with 'Y' or 'y', the program will assume that the answer is 'yes'. Then, the user's full name, designation, start date to the university and willingness to go for the trip must be asked and the price of the trip is calculated.

The main function should then call the function *format_data ()* to put the acquired data into standard format. Then *calculate_price ()* function is called to calculate the price of the trip. The information should then be displayed on screen as per given format given below.

At the end, the program should ask the user if he/she wants to perform calculation for someone else. As long as the response is yes, the program continues. While taking inputs from user in main function, following guidelines are to be followed:

- **Name** should have at least two or more sub names (i.e first and last name along with a space in between). As long as a name does not have a space, the program should keep asking for the correct name.

- **Start Date** should be in the format ***DD.MM.YYYY***. Moreover, the year should be between 1993 to 2023 (both inclusive). As long as the format is incorrect or year does not contain four digits and/or contains characters other than digits, the program should keep asking to provide correct start date unless provided.

- For **willingness** to go on a trip, if user's response starts with 'Y' or 'y', the answer should be considered as 'yes'. Otherwise, the answer must be considered as 'No'.

*format_data ()***:** This function should receive the name, designation, and willingness of the user as parameters. Then, it should return the formatted name, designation, and willingness by performing following actions:

- Format the names by making all initial letters capital and other alphabets in lowercase. Moreover, any sub-name with just two words (de, ur, etc.) should be kept in lowercase. It should ensure single space between the names.

- Format the designation through the starting or ending letters of the given input by user and assign them correct names as per given table. Moreover, it should also make the first letter capital and others in lowercase.

- The willingness should be formatted by making the first letter capital and remaining in lowercase.

*calculate_price ()***:** This function should take the formatted position, start date and willingness of the individual and return the amount to be paid. If the willingness is 'no', the payable amount should invariably be zero.

The program output should be exactly as follows (bold entries are sample input):

```
Do you want to check payable amount for the trip: y

Enter your full name: stevejobs

Enter your full name with space(s): steve jobs

Enter your position: dean

Enter your start date as DD.MM.YYYY: 12.06.2030

Invalid. Enter the start date in correct format: 12.06.1990

Invalid. Enter the start date in correct format: 12.06.215

Invalid. Enter the start date in correct format: 12.01.20t6

Invalid. Enter the start date in correct format: 12.01.2016

Would you like to participate in event: yeS


The Details of individual are:

Name = Steve Jobs

Position = Dean
```

```
Start Year = 2016

Willingness = Yes

The individual's expenditure will be 400 USD.


Do you want to check for someone else: y

Enter your full name: john DE vERies

Enter your position: Prof

Enter your start date as DD.MM.YYYY: 12.03.2015

Would you like to participate in event: y


The Details of individual are:

Name = John de Veries

Position = Professor

Start Year = 2015

Willingness = Yes

The individual's expenditure will be 350 USD.


Do you want to check for someone else: yeSs

Enter your full name: a j khan

Enter your position: STUD

Enter your start date as DD.MM.YYYY: 12.03.201p

Invalid. Enter the start date in correct format: 12.03.2019

Would you like to participate in event: YEs


The Details of individual are:

Name = A J Khan

Position = Student

Start Year = 2019

Willingness = Yes

The individual's expenditure will be 200 USD.


Do you want to check for someone else: Yep

Enter your full name: eLON mUSK

Enter your position: sTAFF

Enter your start date as DD.MM.YYYY: 12.05.2005

Would you like to participate in event: yep


The Details of individual are:
```

```
Name = Elon Musk

Position = Staff

Start Year = 2005

Willingness = Yes

The individual's expenditure will be 250 USD.


Do you want to check for someone else: yEap

Enter your full name: michael clarke

Enter your position: prof

Enter your start date as DD.MM.YYYY: 12.06.2021

Would you like to participate in event: no


The Details of individual are:

Name = Michael Clarke

Position = Professor

Start Year = 2021

Willingness = No

The individual's expenditure will be 0 USD.


Do you want to check for someone else: Nopee

Have a good day!!!
```

Save your program as **hw06***yoursurname***.py**. Upload your file to Blackboard at "Homework 6".

Make sure you place comments in your program. Place your name, ID as comments at the top. **You should only use the features and commands you have learnt until this homework was given**. You are especially not allowed to use BREAK, CONTINUE, RETURN, QUIT or any other statement that prematurely stops your program.

> *While doing all your homework assignments, remember that:*
> - *You should not work together,*
> - *You should not give or take any files,*
> - *You should not give or take help other than simple verbal hints.*