COP 1000, Principles of Computer Programming

Assignment 5: (20 + 20 + 20)

There are three parts to this assignment - Part 1, Part 2 & Part 3

Part 1: (20 points):

A county tax colleges property taxes on the assessment value of the property, which is 6% of the properties actual value. For example, if a house is valued at $200,000, its assessment value is $12,000. The property tax is then 82cents for each $100 of the assessment value. The tax for the property assessed at 12,000 is $98.4 cents. So, the total tax for the property is ($12000 + $98.4 cents = $12,098.4 cents).

Make sure that your program is interactive, and you use a function for your program.

Deliverables:

- Take a screen shot of your ran program in paste it in a word file
- Submit your .py file/s
- Write a few sentences about what you learnt from writing the program and if you had faced any challenges. If you have faced challenges, I would like to know how you addressed those challenges.

Program Rubric showing the breakdown of points:

Deliverables	**Points**
Screen shot/s of the ran program inserted in the same document that includes reflection and challenges.	2
.py program files	10
Detail comments on each line of the program (3) + Pseudocode with step numbers (3)	6
Reflections & Challenges	2

Total	20

Part 2: (20 points)

A nutritionist helps her patients to evaluate their diets. As part of her evaluation, she asks members for the number of fat grams and carbohydrate grams that they consumed in a day. Then, she calculates the number of calories that result form the fat and carbohydrate using the following formula:

Calories from fat = fat grams x 9

Calories from carbohydrate = carbohydrate grams x 4

Make sure that your program is interactive, and you use a function for your program.

Deliverables	**Points**
Screen shot/s of the ran program inserted in the same document that includes reflection and challenges.	2
.py program files	10
Detail comments (3)) + Pseudocode with step numbers or a flowchart (3)	6
Reflections & Challenges	2
Total	20

Part 3: (20 points)

"Disney University" wants to calculate the revenue for their homecoming basketball games. They have created 4 tiers seating capacities in their stadium using the following chart:

Box Office: $200 for elite life members (only 50 seats available)

Tier 1: $50 (200 seats available)

Tier 2: $30 (400 seats available)

Tier 3: $10 (600 seats available)

Your program should be interactive and asks how many tickets were sold and display the income generated from the ticket sales for each event. The program should use separate **"FUNCTIONS"** for introductory and good-bye messages. The program should ask the user if they want to continue to estimate any other event and quit if the user chooses to. The program should use functions and display the following data.

- An introductory 'welcome message' asking for a name of the user
- Tickets sold for each tier
- Revenue generated from the sales of tickets
- A good-bye message

Deliverables	**Points**
Screen shot/s of the ran program inserted in the same document that includes reflection and challenges.	2
.py program files	10
Detail comments (3)) + Pseudocode with step numbers or a flowchart (3)	6
Reflections & Challenges	2
Total	20

Purpose: The assignment would assess the comprehension of input, output, repetition, and function comprehension of python programming language. The assignment also requires "troubleshooting skills"