COP 1000, Principles of Computer Programming

Assignment 4: (20 + 20)

There are two parts to this assignment - Part 1, Part 2

Part 1: (15 points)

Write an interactive program using python syntax that asks the user to enter the amount of "take home salary for the month". A loop should then prompt the user to enter each of his or her expenses for the month and keep a running total. At the end of the entering the expenses, the program should display if the user is over or under the budget.

Deliverables:

- Take a screen shot of your ran program in paste it in a word file
- Submit your .py file/s. Comment your program in details.
- 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.

Purpose: The assignment would assess the comprehension of input, output, and repetition logic of the python programming language.

Program Rubric showing the breakdown of points:

Deliverables	**Points**
Screen shot/s of the ran program	3
.py program files	7
Detailed comments in the program	3
Flowchart / Pseudocode (use visio or word document)	5
Reflections & Challenges	2
Total	20

2.

The distance a vehicle travels can be calculated as follows:

$$distance = speed \times time$$

For example, if a train travels 40 miles per hour for three hours, the distance traveled is 120 miles. Write a program that asks the user for the speed of a vehicle (in miles per hour) and the number of hours it has traveled. It should then use a loop to display the distance the vehicle has traveled for each hour of that time period. Here is an example of the desired output:

```
What is the speed of the vehicle in mph? 40 Enter
How many hours has it traveled? 3 Enter
Hour          Distance Traveled
1                       40
2                       80
3                      120
```

Deliverables	**Points**
Screen shot/s of the ran program	3
.py program files	7
Detailed comments in the program	3
Flowchart / Pseudocode (use visio or word document)	5
Reflections & Challenges	2
Total	20