**Project 5**

**Objective:**

The purpose of this lab project is to exposes you to writing programs using functions.

**Problem Specification:**

Given the program specifications in project 3, “The PCCC Palace Hotel” problem and the included source program (script), you must define the functions that are called from **main ( )** to solve the problem.

A sample output statement would be:

**PCCC Palace Hotel**

**Eddie’s Billing Statement Room : 311 Invoice#: 246**

**Number of days in hotel: 2 a Single Room**

**Room Charges $675.00**

**Internet Charges (WiFi) $29.85**

**Television Charges (Basic) $8.85**

**Total Charges $703.70**

**Local Taxes $24.63**

**Total Due $728.33**

**Thank you for using PCCC Palace Hotel. Hope to see you again.**

**Requirements:**

* Do not modify my **main ()** function.
* Include your relevant information in the docstring.
* Follow programming standards as explained in the class( input 🡪 process 🡪 output) in all functions.
* All the rates are defined as local constants and the defined constants are used in calculations.
* A menu displays the options used for tv and net options.
* The local tax rate is 3.5% and is defined as a local constant.
* The function **setdata ()** reads the name, number of days and room number and returns them to main.
* The function **setroom ()** returns the room type and room charges.
* The function **setnet ()** and **settv ()** returns the type used and cost for each.
* The function **findtotal ()** returns the total cost without taxes.
* The function **heading ()** prints the first 3 lines’ information
* The function **output ()** prints the next 3 lines’ information.
* The function **footing ()** prints the last 4 lines’ information.

**Grading criteria:**

|  |  |
| --- | --- |
| 3 points | Your name, Date, course #, Due Date, name of the program and explanations. |
| 3 points | All constants are defined locally, correctly and properly. |
| 3 points | Appropriate and descriptive local identifiers are used. |
| 5 points | **setdata** accepts the data andperforms its task correctly. |
| 8 points | **setroom** iscompletely self-contained and performs its task correctly. |
| 8 points | **setnet** iscompletely self-contained and performs its task correctly. |
| 6 points | **settv** iscompletely self-contained and performs its task correctly. |
| 5 points | **findtotal** iscompletely self-contained and performs its task correctly. |
| 6 points | **heading** iscompletely self-contained and performs its task correctly. |
| 6 points | **output** iscompletely self-contained and performs its task correctly. |
| 6 points | **footing** iscompletely self-contained and performs its task correctly. |
| 6 points | Programming standards (IPO) are followed in all functions. |
| 10 points | Every function has a specification (what does it do, number of parameters and type, returned values and types). |
| 5 points | Programs’ hierarchical (structured) chart is submitted and is correct. |
| 5 points | A flowchart for **setroom** ( ), only **setroom** ( ), is submitted and is correct. |
| 12 points | Program is clear, runs correctly, and performs the task as specified. |
| 3 points | Multiple test runs showing evidence of all requirements are submitted. |

**Submission Details:**

Submit a print-out of:

* Script (source program)
* A hierarchical (Structured), chart.
* A flowchart for the function **setroom**()
* Test results. Supply your own test data to demonstrate all possibilities.

**\*\*\* Due Date: 05/09/2023 right before the final \*\*\***

**Source Program:**

"""

Name:

class:

Date:

Program Name:

Description:

"""

from random import randint

def main():

name, days, room = setdata()

roomtype, roomcharges = setroom(room,days)

nettype, netcharges = setnet(days)

tvtype, tvcharges = settv(days)

totalcharges = findtotal(roomcharges, netcharges, tvcharges)

heading(name, room, days, roomtype)

output( roomcharges, netcharges, nettype, tvcharges,tvtype)

footing(totalcharges)

main()

input("\n\nPress Enter to Continue")