CS128 Test#2 – Programming Tasks Spring 2022

Test #2 is worth a total of 20 points.

- The written quiz questions are worth 5 points.
- The programming tasks are worth a total of 15 points.

Programming Task Guidelines:

1. Close all browser tabs except for codio.com, pythontutor.com, zybooks.com, and canvas.jcu.edu. You are not allowed to open any other website.
2. You may refer to the code examples from the lessons, labs, and homework.
3. You may refer to printed or handwritten notes while working on the programming tasks.
4. You are not allowed to communicate with anyone except the instructor.
5. When you are finished, save your notebook and submit test1.pdf and test1.ipynb to Canvas.

Task1 (4 points):

- Prompt the user for a starting and an ending number.
- Use a for loop to print the sequence of even numbers between the starting number and the ending number (inclusive). Sample executions:

```
enter start:100
enter  end:120
100 102 104 106 108 110 112 114 116 118 120
```

```
enter start:4
enter  end:13
4 6 8 10 12
```

```
enter start:97
enter  end:108
98 100 102 104 106 108
```

```
enter start:1
enter  end:7
2 4 6
```

Task2 (5 points):

Kids under age 12 get free entrance to the museum. Adults over age 65 get free entrance on Monday or Tuesday.

- Create a function named **free_entrance** that takes two parameters: (1) age, and (2) day. The function should return a boolean value indicating whether entrance is free based on the age and day.
- Test your function with the assert statements provided.

Task3 (6 points):

- A restaurant charges an automatic tip of 20% for parties or 10 or more people. The tip is 15% for smaller parties. Create a function named **tip_percent** that takes one parameter: (1) the number of people. The function should return the tip (as a decimal). Test your function with the assert statements provided.

Number of people	**Tip**	**Tip as a decimal**
10 or more	20%	0.2
Less than 10 people	15%	0.15

- Create a function named **total_cost** that takes three parameters (1) the number of people, (2) the check amount and (3) a boolean indicating whether the table has an ocean view or not. The function should calculate the tip and add it to the check. If the table has an ocean view, an addition $10.00 charge is added (do not include this amount when calculating the tip).
- Do not duplicate code between the functions. The **total_cost** function should call the **tip_percent** function.
- Test your function with the assert statements provided.

SUBMIT TO CANVAS:

1. Save and download test2.ipynb. File/PrintPreview, ctrl-P, save as pdf.
2. Submit test2.ipynb and test2.pdf to canvas.