CSCE 2004 – Programming Foundations I
Programming Project Report

Name: Cameron Eddy
Date: 3/21/2024

Academic Integrity Statement: I pledge that I have neither given nor received unauthorized help on this programming assignment.

For this programming assignment, the objective was to get comfortable using functions by creating a program for users to book an outer space trip. The inputs included: the destination type, location, length, first-class option, insurance option, unique activity option, bill confirmation, and a second trip option. The program outputs how much the bill costs depending on the inputs the user chose. For error handling, I made sure all boolean inputs were either 'Y' or 'N' case-insensitive, the input for trip length was greater than or equal to one, and that the trip destination and trip type were letters allowed for those given inputs.

For design decisions in the confirmTrip and addExtra functions, I put a switch statement to accommodate each planet's different activity. In all the functions that dealt with boolean values, I used a while statement to check if the input was 'Y' or 'N' and if it was 'Y' then I set the boolean value to be true and false if it was 'N'. Also in the main function, I printed the bill before asking the user to confirm their trip. I did this because to me it made more sense that the user should be able to see their bill before being asked to confirm their trip.

The starter code I was given was the global variables, the setDestination function, and the getTripCost function. I was also given the outline for the parameters and outputs of the functions I needed to implement. To implement the code, I spent one day implementing half the functions, another day implementing the other half, and the final day making the main function and testing the outputs.

```
What type of destination are you planning to visit? Type (I) for inner or (O) for outer.
j
Invalid choice! Try again.
```

Test for destination type dealing with invalid inputs

```
<       J ~ for Jupiter                 $40000.00       >
<       S ~ for Saturn                  $40000.00       >
<       U ~ for Uranus                  $40000.00       >
<       N ~ for Neptune                 $40000.00       >
a

Oops! Your choice is not included in the list. Try again.
```

Test for destination choice dealing with invalid inputs

```
How long do you want your trip to be?
-1
Your trip has to be at least one day long, try again.
```

Test for invalid inputs of trip length

```
Do you want to add insurance to your trip for $1000? (Y/N)
o
The value you input was not 'Y' or 'N', try again
```

Test for boolean functions' invalid inputs

```
        Number of destinations: 3
        Subtotal: $76000.00
        Discount: $3000.00
        Total: $73000.00
-----------------------------------
Let's make sure the trip details are correct.
You have planned a inner trip to Venus with an additional atmospheric balloon ride.
If everything seems correct, type (Y) for yes. Otherwise, type (N) for no.
```

Program outputting bill and input

Because this project was over spring break, I broke it up into multiple days. However, I would often keep having to recheck the project requirements as I would forget after long breaks. Altogether it probably took me 4-5 hours to do. Next time I should be more focused when doing it, having to review what the project requirements were was very time-consuming. The program works fine, but one thing I was unsure about was whether the program should exit or prompt the user to reinstate their choices if they don't confirm their bill. I decided I would just let the program exit.