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IT-140 Final Project Script One: Rental Car

Reflection

This project was a good opportunity to put what we have learned about Python so far, into practice. I have noticed that making errors is not only common, but an important and necessary part of coding in general. Regarding this project, assigning and modifying variables was a key concept. Variables are needed for user input and are the basis for the program to make calculations. Variables make it a lot easier to create and modify a script because you are defining them with values so that you can build the rest of the program in a more efficient manner. Below are examples of variables in the script.

#Pricing

budget\_charge = 40.00

daily\_charge = 60.00

weekly\_charge = 190.00

#Odemter Reading

odoStart = int(input("Starting Odometer Reading:\n"))

odoEnd = int(input("Ending Odometer Reading:\n"))

totalMiles = int(odoEnd) - int(odoStart)

I found that the most common errors in my script pertained to undefined variables. This taught me were to place the variables and their values in my code.

Branches are necessary when the program needs to set up conditional statements. They are used to determine what step to take next based on the user input. The final calculations are based on what the user enters into the input fields. This can be seen below in the “if statements” of the script.

#Pricing based on Rental Code input by user and miles driven

if rentalCode == "B":

mileCharge = 0.25 \* totalMiles

if rentalCode == "D":

averageDayMiles = int(totalMiles) / int(rentalPeriod)

if averageDayMiles <= 100:

extraMiles = 0

elif averageDayMiles > 100:

extraMiles = averageDayMiles - 100

mileCharge = .25 \* extraMiles

averageDayMiles = int(totalMiles) / int(rentalPeriod)

if rentalCode == "W" and averageDayMiles > 900:

mileCharge = rentalPeriod \* 100

elif rentalCode == "W" and averageDayMiles <= 900:

mileCharge = 0

#Rental Summary

if rentalCode == "B":

baseCharge = rentalPeriod \* budget\_charge

elif rentalCode == "D":

baseCharge = rentalPeriod \* daily\_charge

elif rentalCode == "W":

baseCharge = rentalPeriod \* weekly\_charge

mileCharge = rentalPeriod \* 100

amountDue = float(baseCharge) + float(mileCharge)