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Title?

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Abstract

— What is the project about?

I have currently created my different classes for my classes that interact with each other. I have also established inheritance between different classes that need to share classes with each other. For example, I have established inheritance between both the customer class and the mechanic class with the person class because they share the classes of name, phoneNumber, and taxRate. I have also created the UML diagrams to describe these interactions. However, I am still working on creating the formulas to generate the customers bill.

Introduction

I was motivated to create this program in order to make it easier for my mechanic to calculate the price of his customers car repairs and provide a visually appealing breakdown for the customers to better understand their bill. This document will outline the work done thus far.

Detailed System Description

The system takes in the input of parts prices, hourly rate, name, and hours worked from the mechanic, as well as tax rate to calculate the price of the repair for the customer. It will also take in the customer's name, car make, model, and year from the customer. It will use this information to print out a bill for the customer.

UML Diagrams:

Person
-name: String -phoneNumber: String -taxRate: Double
+Person() +getName(): String +setName(): String +getPhoneNumber(): String +setPhoneNumber(phoneNumber: String): void +getTaxRate: double

+setTaxRate(taxRate: double): void

Customer
-address: String
+Customer() +getAddress(): String +setAddress(address: String): void

Mechanic
-hourlyRate: double -hoursWorked:double
+Mechanic() +getHourlyRate(): double +setHourlyRate(hourlyRate: double): void +getHoursWorked(): double +setHoursWorked(hoursWorked: double): void

Car
-make: String -model: String -yearOfCar: double
+Car() +getMake(): String +setMake(make: String): void +getModel(): String +setMake(make: String): void +getYearOfCar(): double +setYearOfCar(yearOfCar: double): void

Parts
-partName: String -partPrice: double
+Parts() +getPartName(): String

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+setPartName(partName: String): void
+getPartPrice(): double
+setPartPrice(partPrice: double): void
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Requirements

The problem that this system is addressing is not only helping the mechanic keep track of what work he does on the customer's car, but also displays an easily understandable bill for the customers which breaks down the price of the parts, the hours worked by the mechanic, the hourly rate of the mechanic, and the total cost of the repair for the customers ease.

Literature Survey Describes other work that has been done addressing the same or similar problems.

There are currently several free online repair estimators that consumers can use online to estimate the cost of the repair for their car, but they often involve entering in personal information that many people may not feel comfortable submitting on the internet. I think that a program that is used by the mechanic would be seen as more trustworthy to people, as their mechanic is generally someone that they would trust.

User Manual

The system should be used by mechanics to give the customer a rough estimate of a car repair before the repair is done to give the customer a heads up of roughly how much the repair will cost. It will also be used to print a finalized bill for the customer when the repair is completed.

Conclusion

This system will accomplish the estimation and billing of a customer for a mechanic. It will provide an estimate using the inputs of the mechanic before the repair is completed in order to give the customer an idea of the cost of the repair before it is completed. It will use the mechanics hourly rate, the expected hours worked by the mechanic, and the expected price of the parts to complete the estimate. It will also be used by the mechanic at the end of the repair to print a bill for the customer that prints out the cost of the different parts, repairs, the mechanics hourly rate and the hours that the mechanic took to complete the job.

References/Biography