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Java programming II

Car Parking System

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# Introduction

For my assessment I created a car parking system prototype which records details of vehicles using the car park. By doing this I demonstrated a vast amount of skills by implementing key features such as using several calculations and using object oriented programming, thus I have also demonstrated an appropriate use of access modifiers, abstraction, serialization and the use of a super method to link subclass methods to the parent class methods. When building my GUI I designed what I wanted it to look like so that I had less trouble when it came to choosing my panels and components. Designing the GUI by drawing also helped because it reduced the amount of repetition from my panels and also helped me choose the best possible layout manager to use for the specific panel or frame. I implemented the buttons of my GUI using action listeners and used mouse listeners on my car array which each position contained a label, my lorry array which was also filled with labels for each position and coaches array containing labels at each position. I found implementing mouse listeners easy once I had done some research, firstly I implementing the clicking mouse listener whereby left clicking on a certain position in an array on my GUI displayed details of the parked vehicle (only if there is a vehicle parked at that position) such as the Registration of that vehicle, what position that vehicle is parked in, and the cost of that vehicles parking. I then implemented the right click which removed the vehicle from the car park also decreasing the current total of the car park. And finally the last mouse listener I implemented was the middle click which gives the user the option to change/update the current vehicle attributes for any vehicle they select, details that can be edited are different for each type of vehicle such as you can only edit the length, weight, and registration number on a lorry, additionally I have made sure that the charge for each vehicle is updated every time it is edited for an accurate currentTotal in the car park.

# Final application

I am really happy with my final prototype for my car parking system because I have thoroughly tested it over and over thus I have also asked my peers to test my validation so that I could improve/fix any inputs, overall I think that it has been validated to a high standard. I think that my validation successfully implemented parts of my assessment followed by my improved design of the car parking GUI. Furthermore I am going to carry on working on my prototype to further improve what I think my biggest weakest is which is repeating/refactoring my code. Thus I will learn more by trying out new ways to implement certain methods which might be more efficient but overall I think that the prototype is very well structured and works very well with rigorous testing.

The pros of this assessment:

* Greater understanding of java programing language as a whole
* Greater understanding of object oriented programing

Cons

* Even though I managed to implement my save and load functions I think that more research is needed on file handling for future references.