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SOFT 252 Referral assignment
Reflective Document

Github link: https://github.com/Ryan-rc-Carter/SOFT252-Referral-assignment

Overall, progress on this assignment was hindered at several times due to uncontrollable circumstances such as the country-wide power cut as well as a hardware failure in my computer, which meant I was unable to work while I waited for the new part to arrive. That aside, the actual programming of the library application was ok, in hindsight, I could have used pseudocode or diagrams to plan out the layout and workings of the program so that the application could be built faster and without any excess or unused code.

Designing the Superclasses and Subclasses was relatively simple as the Users superclass just required a username, password and their first name and surname. The resources on the other hand were a little more complex as they required their name, id, Dewey decimal class, their type, their availability, an average rating and a list containing all the given user ratings. The appropriate subclasses, such as Client and Admin for the Users superclass and Book, DVD and Magazine for the Resource superclass. When creating the UI design, I initially tried to go for a multi-window layout in which the Client and Admin UIs appeared in separate windows, however there was an issue with netbeans' compiler which meant I had to rebuild everything I had done, which at that time I had only just created the superclasses and subclasses, in a separate Netbeans project. In the end I decided to go for a single window setup and have multiple panels which displayed user specific content. For example, Admins can see the list of resources and the message board but can also see the "New Resource" and "Extension" panels whereas the Clients can see their borrowed resources, due resources and extension requests panel as well as the resource list and message board.

The application meets the client specifications as the application has a login feature with three client account and one admin account, admins can add new resources to the application, clients and users can see all the available resources, clients can return a resource at any time and are warned if the resources they have borrowed are due or overdue, clients are reminded on the day of return to return that resource and reminded every day after the due date, a rating from 1 to 5 can be given for a resource when it is returned and an average rating is shown in the resource list and clients can apply for a one week extension on a specific resource which can be approved or denied by the administrator.

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One feature that is missing is the “Request new resources” section that allows clients to request a new resource to be added to the resource list by the admin. I could not add this feature in due to time limitations and the above power issues.

The application could be improved in several ways, such as the full implementation of the Dewey Decimal Classification so that users can sort through the resources to find different subject matters, such as literature, history, technology, etc Another feature that could have been added was a way of only messaging specific clients directly that their extensions had been approved or denied by the administrator or that their resources were due or overdue to be returned.

From a development point of view, I should have used more appropriate version control, rather than just pushing unfinished work into the master branch, I should have created a separate branch to work on so that any bugs didn’t affect the master code. This would have been much more efficient since instead of having to constantly search through the document for the broken code, i could have just looked at the branch and reverted a push if necessary. As stated in the opening paragraph, using some form of pseudo code would have massively improved the speed of which I could have gotten the application coded since it would have just been a case of translating it into java instead of stumbling through the code, switching between netbeans and the assignment specification to see what to do next. This may have also reduced the amount of bugs that I would have encountered.

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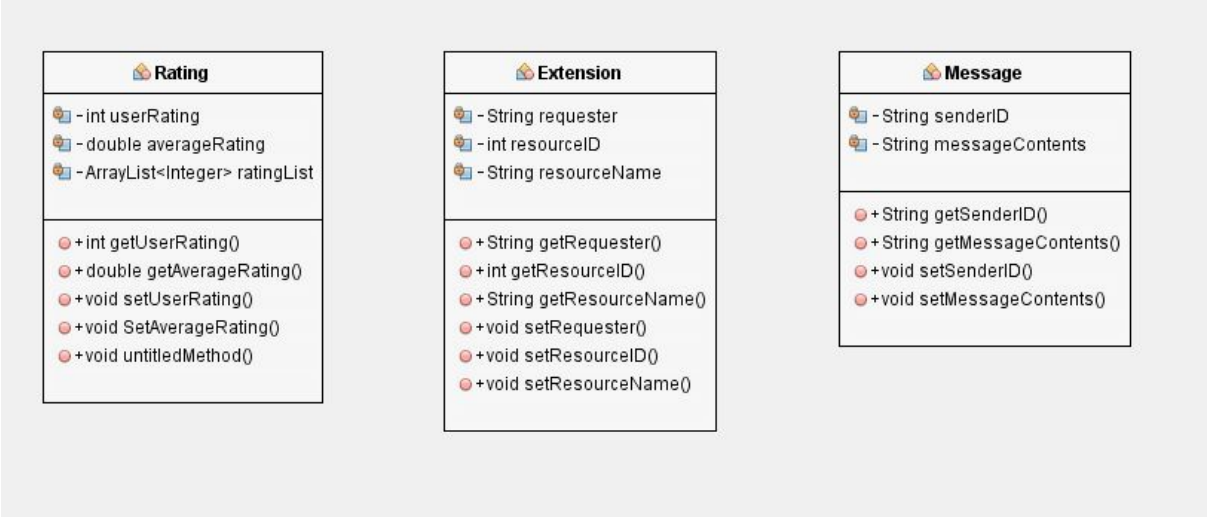
UML Diagrams:



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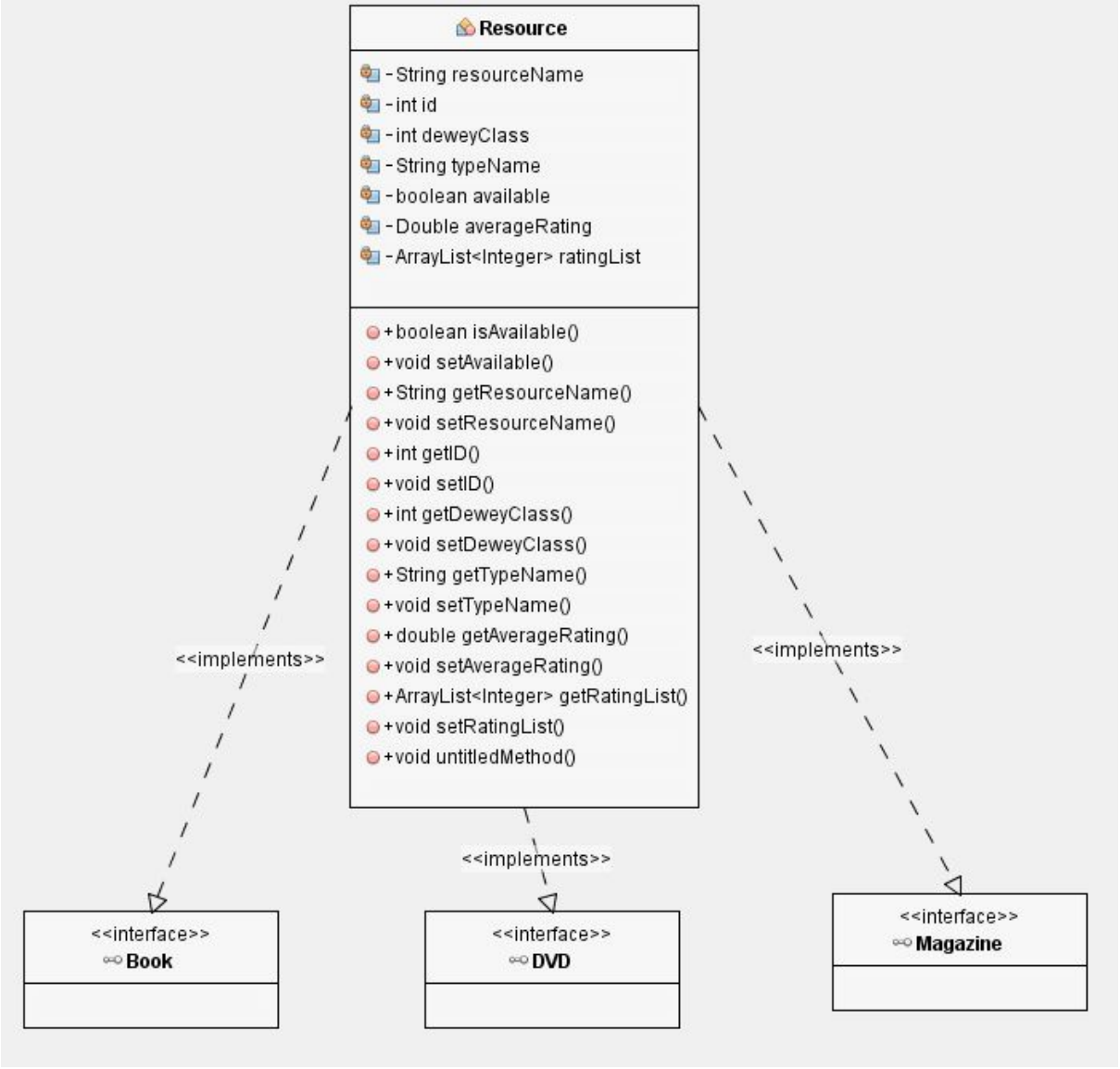
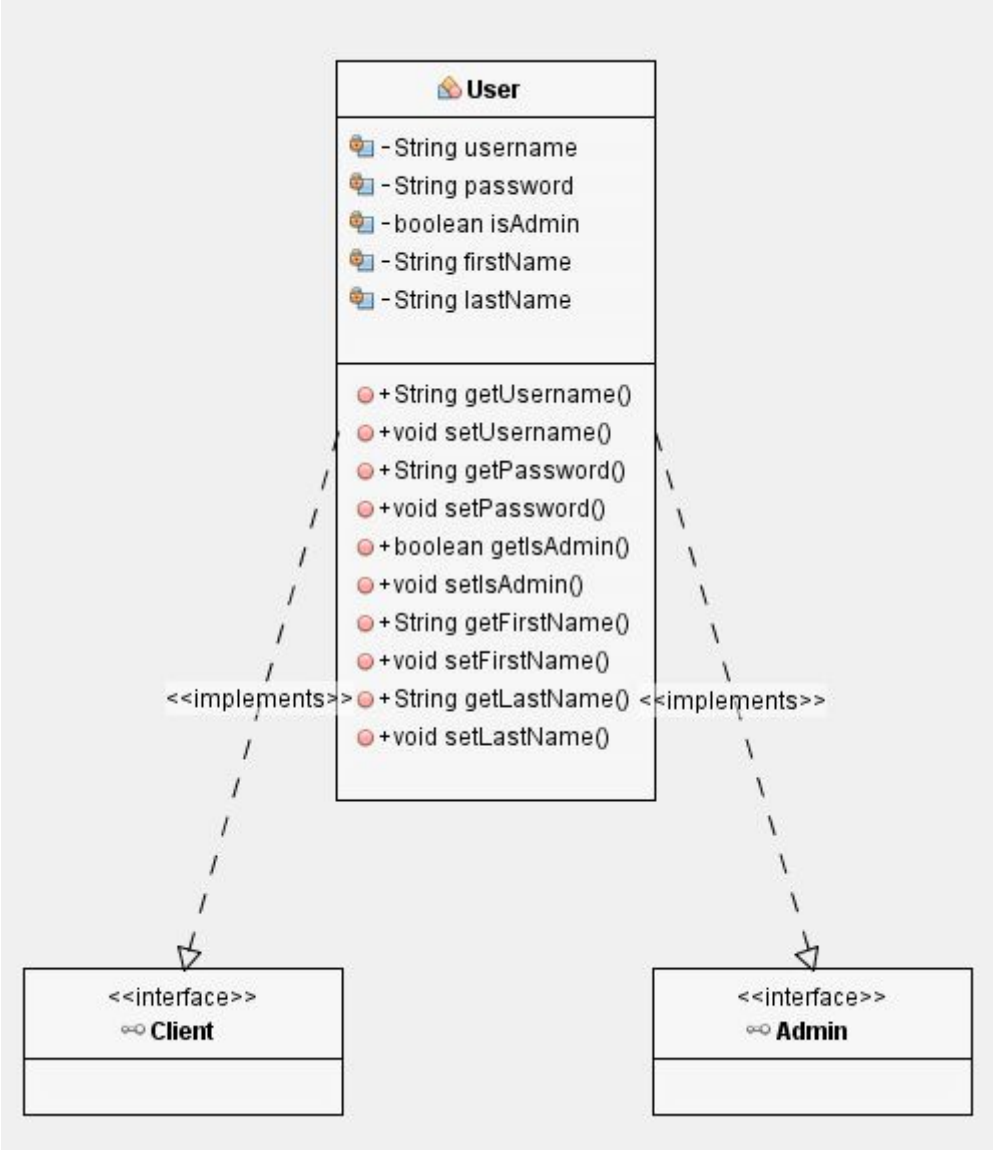
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