Design Document

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1. This system UI is based on javafx.
2. Use JDBC to interact with MySQL database.
3. self-disclose about not-yet finish part:
   1. Book search should only show one result for multiple co-author.
   2. It should be able to use substring of author and title to search book, without providing ISBN.
   3. Update fines with date can only done by the button in my design. I fail to design an automatically update program.
   4. Fine-update is limited to create new fines tuples, not able to update existing tuples.
   5. Fines can only be paid for exact amount in my design, which is not require most situation.
4. Lesson Learn:
   1. The time spend on UI is far more than I estimated.
   2. Prevent SQL Injection should be adopted into design, like using prepare statement. I will design this way in the future.
   3. When functions number grows, many times I feel that I am re-inventing wheels again. Design function more generally to be share used.
   4. To solve the design style program, the usage of UML is needed. I should learn and practice more in the future.
5. Thanks this project. Although not enough time for making it perfect, I really enjoy building system and watch it works☺