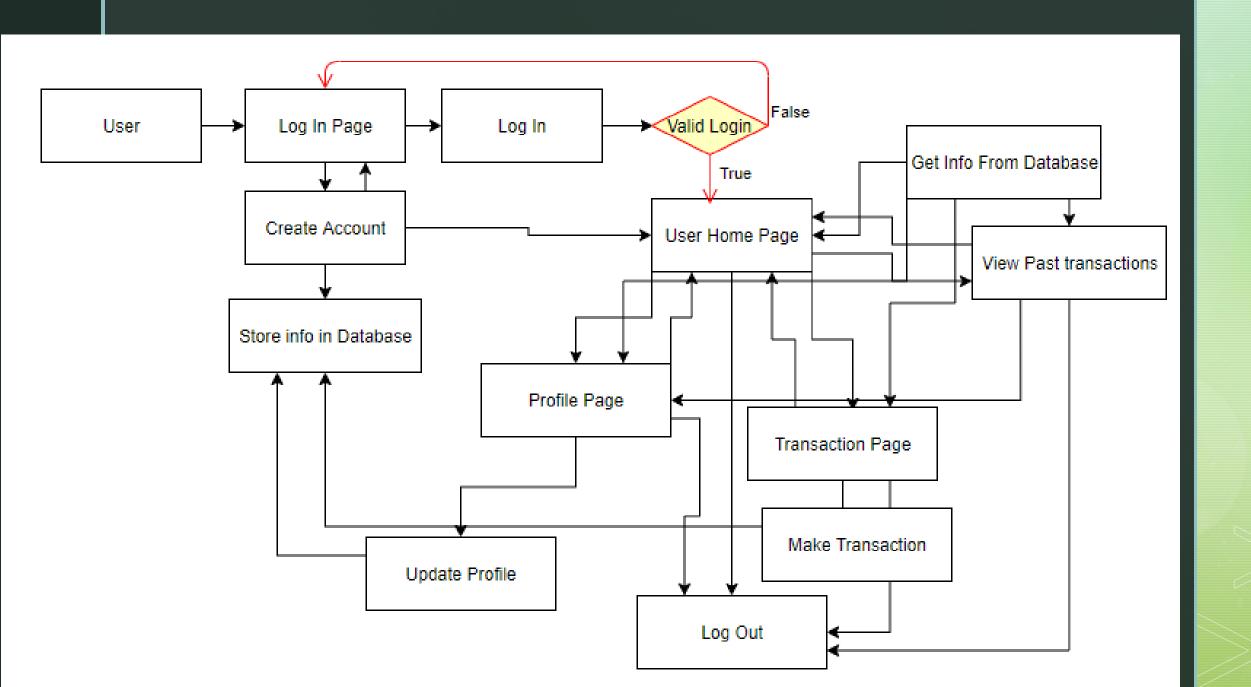
By Sean Grano

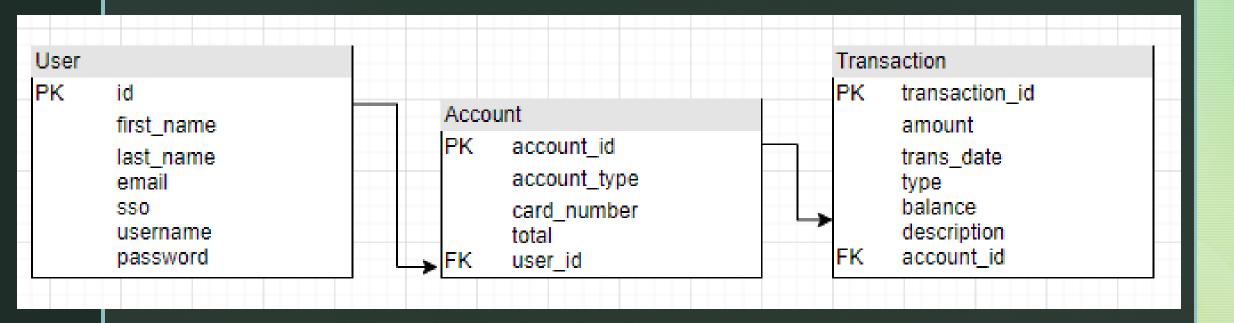
# Online Banking Application

### Tech Stack

- Java
- Sql
- Javascript
- Spring Boot
- .jsp
- html
- CSS
- bootstrap



## Schema Diagram



#### Tasks

- 1. Create an HTML Log In page
- 2. Create an HTML Create Account page
- 3. Create an HTML View Profile Page
- 4. Create a HTML Transaction page
- 5. Create a HTML Past Transactions page
- 6. Create CSS page and add inline CSS to pages as needed

#### Tasks cont.

- 7. Add javascript to Create Account page for password
- 8. Add javascript to Profile page to make it so User can only change one property at a time
- 9. Add javascript to Transaction page to ensure user inputs valid amounts
- 10. Convert HTML pages to .jsp pages
- 11. Create SQL Tables (Entities) for bank application
- 12. Create Spring Boot Bank Application

#### Tasks cont.

- 13. Create DTO classes that match up to the SQL tables
- 14. Create the DAO interfaces for the Entities
- 15. Create Transaction, Account and User Services
- 16. Create a controller class for viewing the pages
- 17. Create a controller class to add functionality to the pages
- 18. Connect to database through application.properties file and have spring boot read .jsp files

#### Tasks cont.

- 19. Create a method for each .jsp page in the ViewController page
- 20. Add methods to UserController that add functionality to the pages and add required html to .jsp pages
- 21. Create testing methods for each dao method used
- 22. Add exception handling
- 23. Add BCrypt to password and update login validation
- 24. Information displayed on the pages is taken from the database
- 25. Information entered into the pages is stored in the database

## Challenges

- Problem: Designing the pages, deciding how each page should look
- Solution: Checked out some Banks websites and based mine off theirs
- Problem: Deciding what entities are needed for the bank application
- Solution: Looked up what information was displayed on a bank application and what information what required to create a bank application Then put them in groups and created tables based off those groups

## Challenges cont.

- Problem: Getting the update function to work on the Profile page
- Solution: Used @ModelAttribute for updating and then checked which properties weren't null and then updated that property
- Problem: Getting the date for past transactions to appear without the time
- Solution: Used SimpleDateFormat to make it appear correctly