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Professor Arias

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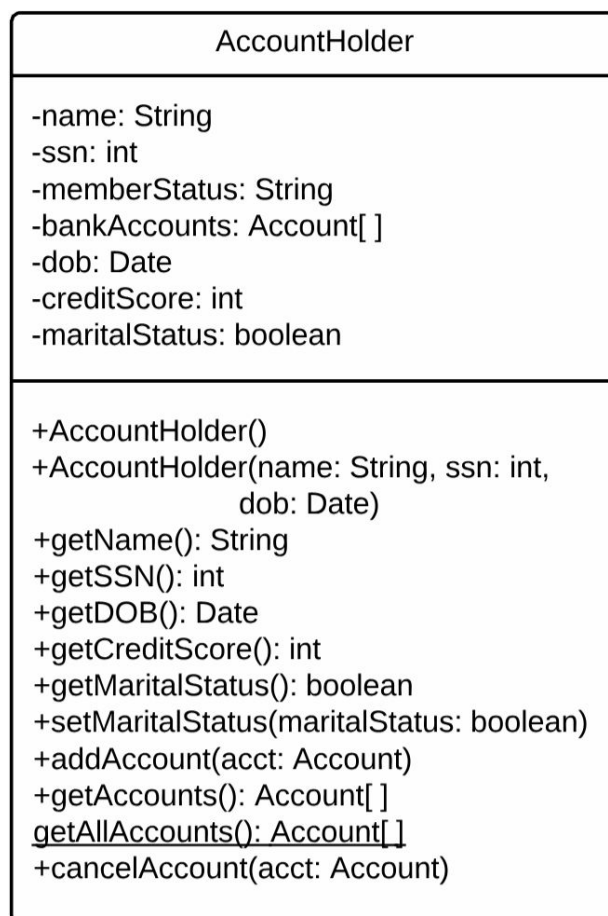<div align="center">Computational Banking System</div>

Proposal:

I plan on creating a banking system using Java to keep track of various components of one's financial information. This program will be able to perform various financial computations based on balance, interest rates, and other financially significant variables. While I have no experience in databasing with MySQL, I do not think that databasing is an essential component to this project. Storing information in a database is useful, but this program's main features will be purely computational. If I have enough time for independent research, I may implement some features of MySQL to increase the usability of the program.

The classes that I will implement to the program are: AccountHolder, Account, Transaction, Card, and the main class which is used for user-selected computations. A rough-draft UML diagram of the AccountHolder class is provided below as a template for design. This program will also keep track of user transaction history, loan eligibility, credit limits, and monthly income, which is important when it comes to properly managing one's funds. I intend to create a program which will help the user to figure out how to most wisely invest his funds. It will act as an all-in-one banking system to compute interest formulas, monthly loan payments, annual percentage yield, and calculate likelihood of loan eligibility. Ultimately, this program will act as a solution to many peoples' banking issues. If one does not

completely understand the banking system as a whole, this program will make it easier to understand interest, credit, loans, and banking transactions.

Hopefully, I will be able to use MySQL to store information about a user's net balance, credit limit, minimum monthly credit payments, and monthly income; however, if I am unable to incorporate such elements, the program will still function as a computational banking tool for the consumer. This is an application project that is applicable to any adult living in the modern world. Banking is an unavoidable issue that must be addressed for every adult, and I seek to make a program that makes it much easier to understand.

First UML Diagram:

AccountHolder
-name: String -ssn: int -memberStatus: String -bankAccounts: Account[ ] -dob: Date -creditScore: int -maritalStatus: boolean
+AccountHolder() +AccountHolder(name: String, ssn: int,   dob: Date) +getName(): String +getSSN(): int +getDOB(): Date +getCreditScore(): int +getMaritalStatus(): boolean +setMaritalStatus(maritalStatus: boolean) +addAccount(acct: Account) +getAccounts(): Account[ ] getAllAccounts(): Account[ ] +cancelAccount(acct: Account)

Good. Try to get the MySQL part in.