

Homework 2 Submission

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CRC Objects and Classes

Savings Account (Generalization)	
<u>Responsibility</u>	<u>Collaborator</u>
Maintain Account Data: Account Number, Balance, Status	
Maintain Binding to Customer	Customer
Provide Restricted Data Access	

SavingsAccount
acctNum : int # balance : double # custID : int # status : boolean
+ SavingsAccount() + SavingsAccount(num : int, bal : double, id : int, state : boolean) + setAcctNum(num : int) : void + getAcctNum() : int + setCustID(id : int) : void + setStatus(state : boolean) : void + getStatus() : boolean

Checking Account (Specialization)	
<u>Responsibility</u>	<u>Collaborator</u>
Maintain Account Data: Account Number, Balance, Status	
Maintain Binding to Customer	Customer
Limit Withdrawal Amount	
Provide Restricted Data Access	

CheckingAccount
- acctNum : int - balance : double - custID : int - status : boolean - withdrawalLimit : double
+ CheckingAccount() + CheckingAccount(num : int, bal : double, id : int, state : boolean) + setAcctNum(num : int) : void + getAcctNum() : int + setCustID(id : int) : void + setStatus(state : boolean) : void + getStatus() : boolean + setLimit(limit : double) : void

Customer	
<u>Responsibility</u>	<u>Collaborator</u>
Maintain Customer Data: First/Last Name, Customer ID, Phone Number, and Address, Social Security Number	
Maintain Checking/Savings Accounts	Checking/Savings Accounts
Maintain Credit Score	

Customer
- firstName : String - lastName : String - socialSec : int - custID : int - creditScore : int - phone : int - address : String - accounts : SavingsAccount[]
+ Customer() + Customer(first : String, last : String, ssNum : int, cID : int, phone : int, addr : String) + setFirst(name : String) : void + getFirst() : String + setLast(name : String) : void + getLast() : String + setCustID(id : int) : void + getCustID() : int + getCreditScore() : int + setCreditScore() : void + setSSnum(ssNum : int) : void + getSSnum() : int + setPhone(num : int) : void + setAddr(addr : String) : void + addAccount(acct : SavingsAccount) : boolean + removeAccount(acct : SavingsAccount) : boolean + getAcctNums() : int[]

Application	
<u>Responsibility</u>	<u>Collaborator</u>
Collect Customer Data for Processing: First/Last Name, Customer ID, Social Security Number, Checking/Savings Account Numbers	Customer

Application
<ul style="list-style-type: none"> - firstName : String - lastName : String - custID : int - socialSec : int - acctNums : int[]
<ul style="list-style-type: none"> + Application() + Application(first : String, last : String, id : int, ssNum : int) + setFirstName(first : String) : void + setLastName(last : String) : void + setCustID(id : int) : void + setSSnum(ssNum : int) : void + addAcctNums(acctNum : int[]) : boolean

Application Database	
<u>Responsibility</u>	<u>Collaborator</u>
Maintain a Database of Active Applications	Application
Maintain a Database of Inactive Applications	

ApplicationDatabase
- activeApplications : Application[] - inactiveApplications : Application[]
+ ApplicationDatabase() + createApplication(customer : Customer) : boolean + peekActive() : Application - enqueueActive() : boolean + dequeueActive() : boolean + enqueueInactive() : boolean

Bank Representative	
<u>Responsibility</u>	<u>Collaborator</u>
Processes Applications	Application
Determines Application Status	Application Database

BankRepresentative
- employeeID : int
+ BankRepresentative() + BankRepresentative(empID : int) + setEmpID(id : int) : void + processApplication(app : Application) : boolean

Class Diagram

