

# Teller

## Full Class Description

Employee
-name: String -employeeID: int -loginusername: String -loginpwd: String -type: enum EmployeeType
+Employee() +Employee(attributes) //getters & setters (name, login)

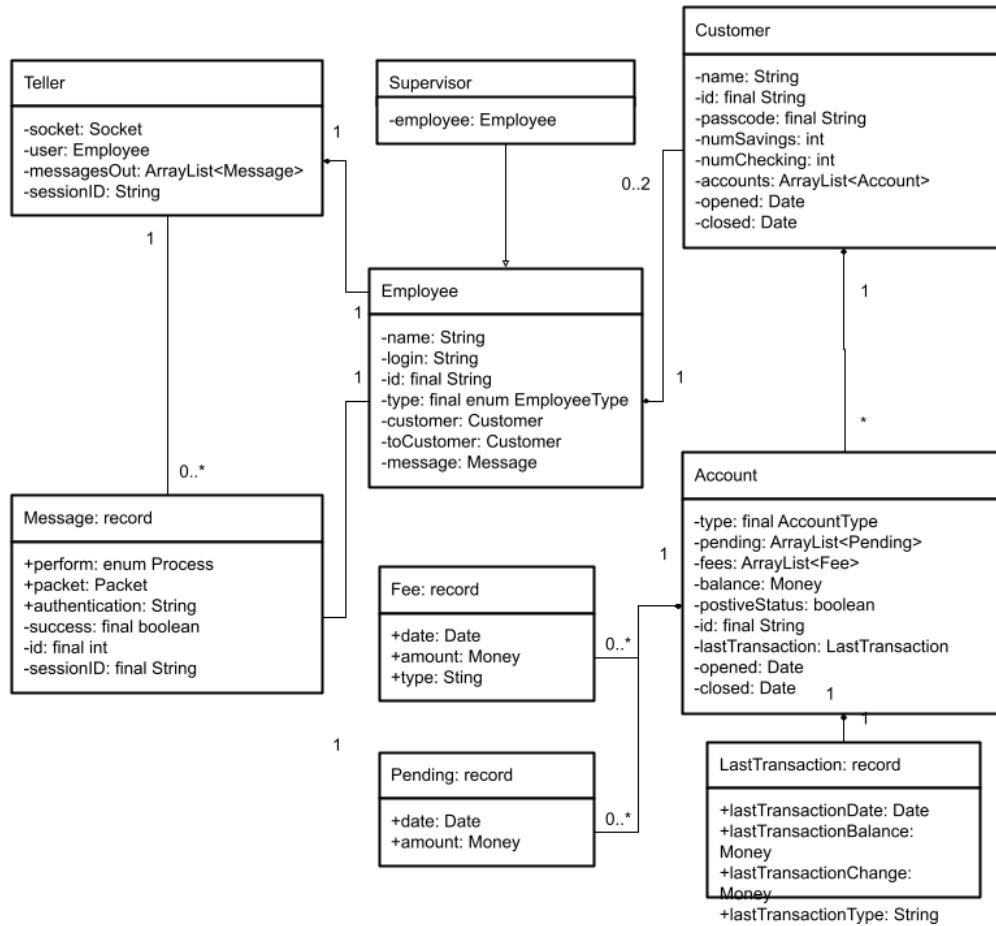
Customer
-name: String -id: final String -passcode: String -numSavings: int -numChecking: int -accounts: ArrayList<Account> -opened: Date -closed: Date
+Customer(int id, String passcode) +getID(): String +getPasscode(): String +getAccounts(): ArrayList<Account> +setAccounts(Account): +addAccount(Account): +removeAccount(String id): //getters & setters (name, numSavings, numChecking)

Account
+type: final AccountType +id: final String -pending: ArrayList<Pending> -fees: ArrayList<Fee> -balance: Money -positiveStatus: boolean -lastTransaction: LastTransaction
+Account(AccountType, int id) +popPending(): Pending +addPending(Pending): +popFee(): Fee +addFee(Fee) //getters & setters (pendings, fees, balance, positiveStatus, lastTransaction)

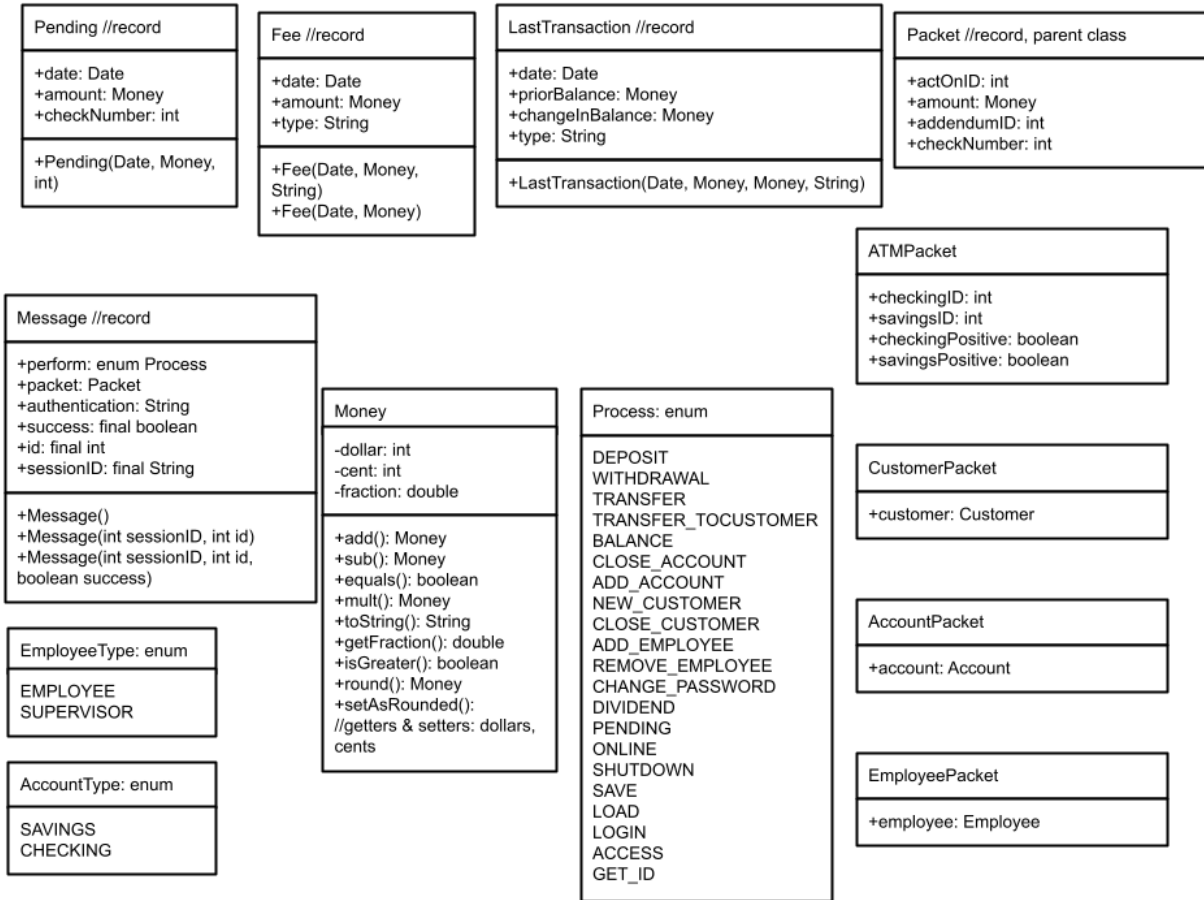
Supervisor
-employee: Employee
+newEmployee(Employee); +changePassword(): +accessEmployee(int id): Message +save(): Message +load(): Message +removeEmployee(): Message +processDividend(): Message +processPending(): Message

Teller
-socket: Socket -employee: Employee -messagesOut: ArrayList<Message> -sessionID: String -customer: Customer
+Connection(Socket, Employee) -makeConnection(): Socket +login(User, String password) +access(Customer) +listen(): Message +send(Message) +closeConnection(): +newAccount(): Message +closeAccount(): Message +newCustomer(): Message +closeCustomer(): Message +accessCustomer(String passcode, String id): Message +withdraw(String id, Money): Message +deposit(String id, Money, Pending): Message +transfer(String id, String toID, Money): Message +transfer(String toID, String frID, Money): Message

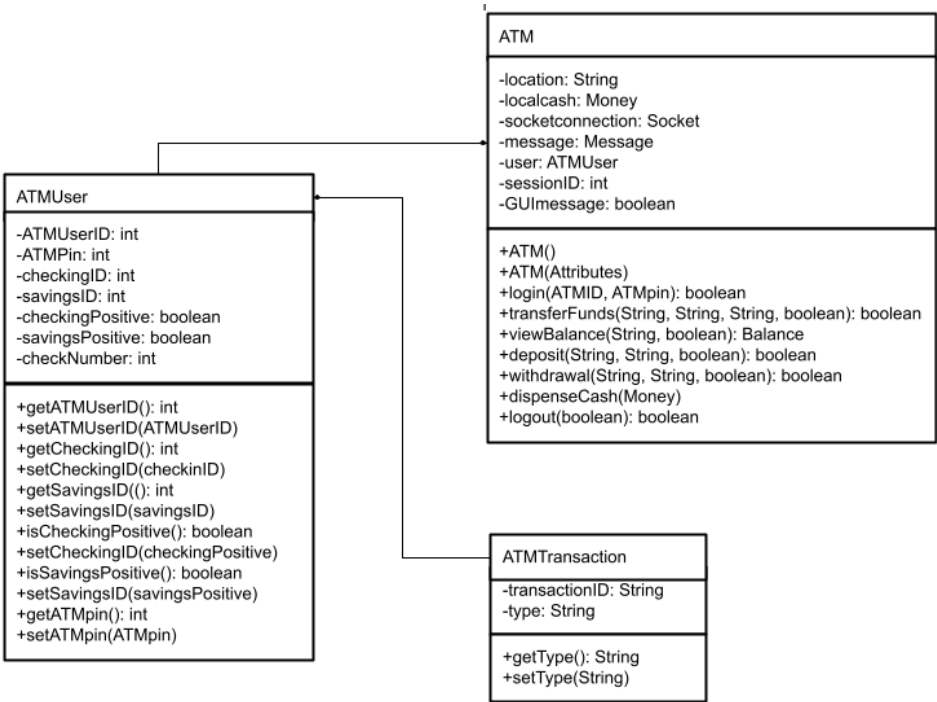
# System



## Supporting Classes



ATM  
System



## Supporting classes

Money
-dollar: int -cent: int -fraction: double
+add(): Money +sub(): Money +equals(): boolean +mult(): Money +div(double d): Money +toString(): String +getFraction(): double +isGreater(): boolean +round(): Money +setAsRounded(): -resolve(): Money //getters & setters: dollars, cents

Process: enum
DEPOSIT WITHDRAWAL TRANSFER TRANSFER_TOCUSTOMER BALANCE CLOSE_ACCOUNT ADD_ACCOUNT NEW_CUSTOMER CLOSE_CUSTOMER ADD_EMPLOYEE REMOVE_EMPLOYEE CHANGE_PASSWORD DIVIDEND PENDING ONLINE SHUTDOWN SAVE LOAD LOGIN LOGOUT ACCESS DISMISS GET_ID

Message //record
+perform: enum Process +packet: Packet +authentication: String +success: final boolean +d: final int +sessionId: final int
+Message() +Message(int sessionId) +Message(int sessionId, int id) +Message(int sessionId, int id, boolean success)

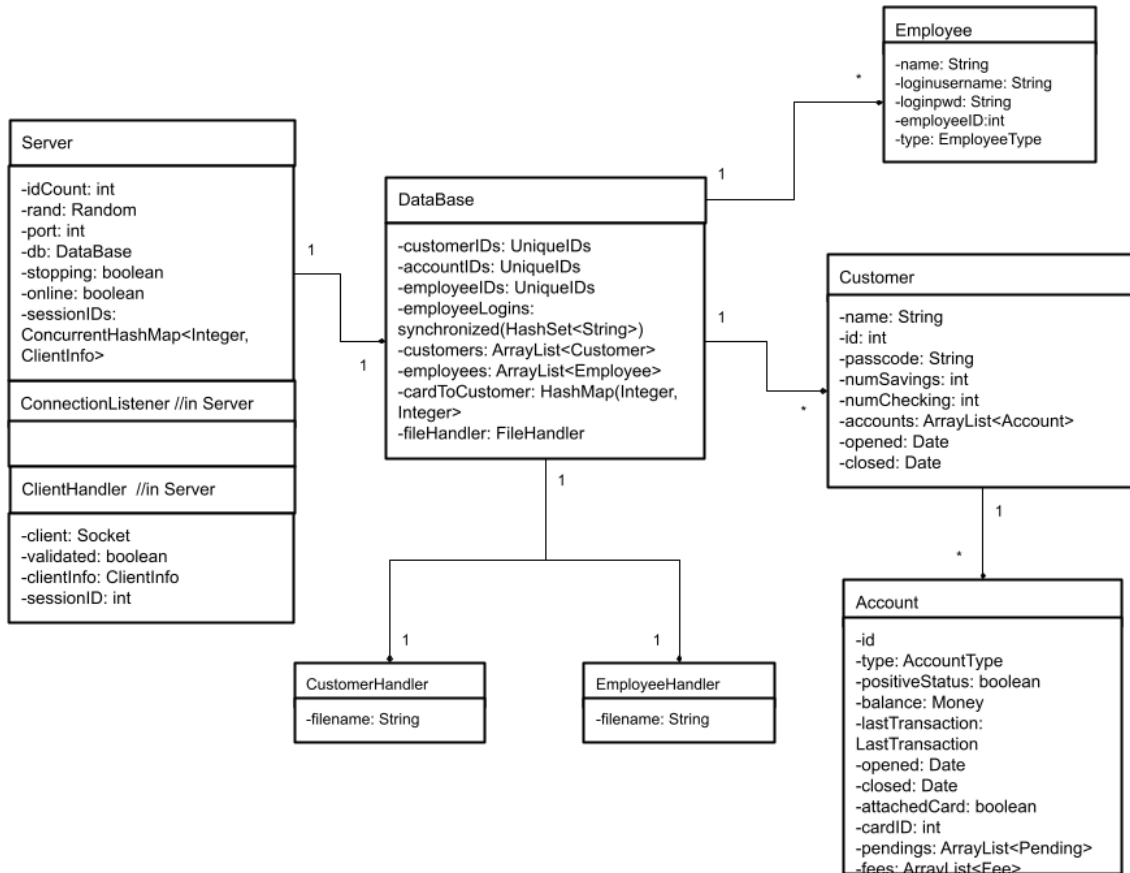
ATMDeposit
+amount: Money +accountID: int +accountPositive: boolean
+ATMDeposit(int, Money, int) +ATMDeposit(Message, boolean) +ATMDeposit(Message, String)

ATMWithdrawal
+amount: Money +accountID: int +accountPositive: boolean
+ATMWithdrawal(int, Money, int) +ATMWithdrawal(Message , boolean) +ATMWithdrawal(Message , String)

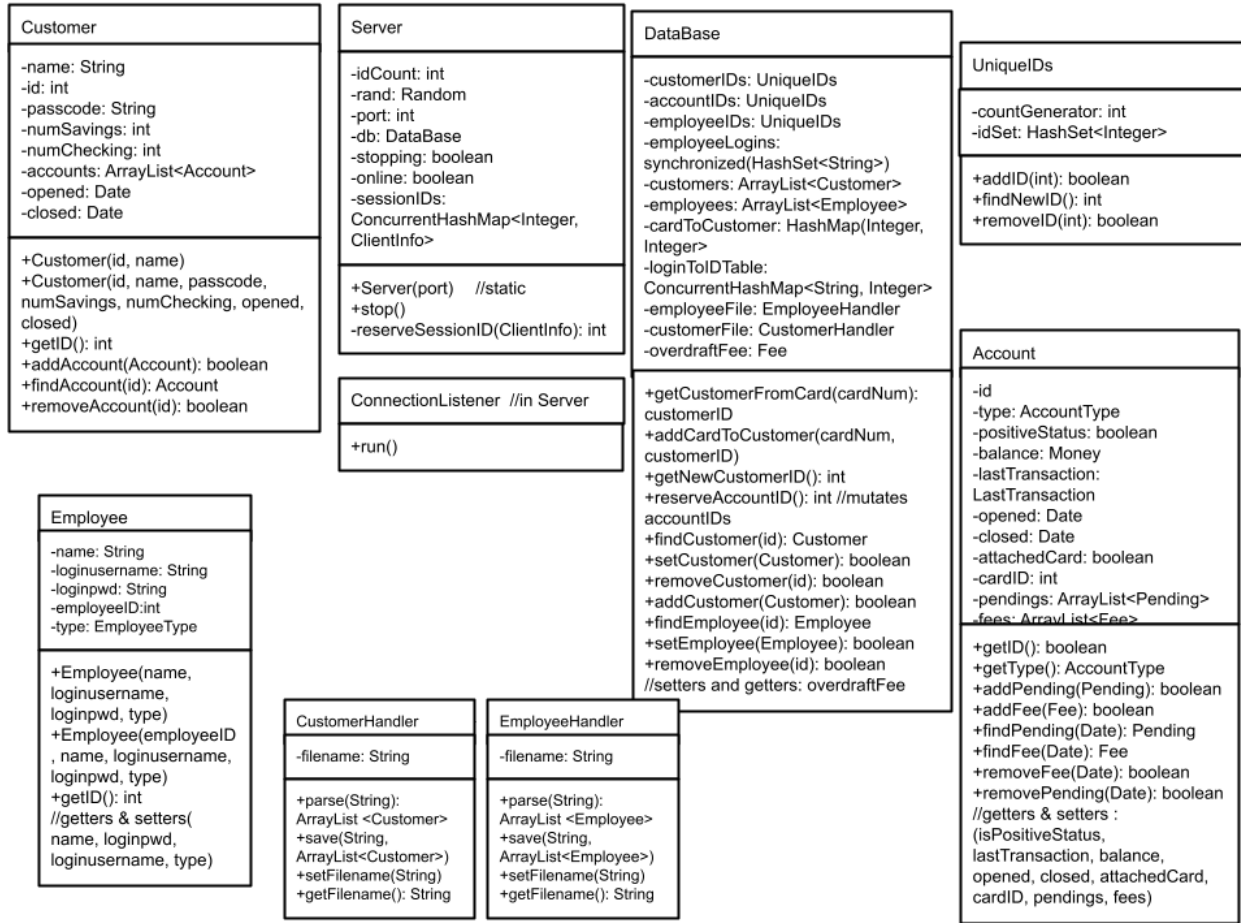
ATMLogin
+checkingID: int +savingsID: int +checkingPositive: boolean +savingsPositive: boolean +cardID: int +PIN:int
+ATMLogin(int, int) +ATMLogin(int,int,boolean, boolean,int,Message) +ATMDeposit(Message, String)

ATMTransfer
+amount: Money +toaccountID: int +fraccountID: int +toaccountPositive: boolean +fraccountPositive: boolean
+ATMTransfer(int, Money, int, int) +ATMTransfer(Message, boolean, boolean) +ATMTransfer(Message, String)

# Server System



## Full Class Description



## Supporting Classes

Money
-dollars: int -cents: int -fraction: double -isPositive: boolean //0, true
+getFraction(): double +add(): Money +sub(): Money +mult(): Money +div(): Money +equals(): boolean +toString(): String +isGreater(): boolean -resolve() +absMoney(): Money -negAdd(): Money -negSub(): Money +round(): Money +setAsRounded(): //getters & setters( dollars, cents, isPositive)

LastTransaction //record
+date: Date +priorBalance: Money +changeInBalance: Money +type: String
+LastTransaction(Date, Money, Money, String)

Fee //record
+amount: Money +date: Date +type: String
+Fee(Date, Money, String) +Fee(Money, String)

EmployeeType: enum
EMPLOYEE SUPERVISOR

AccountType: enum
CHECKING SAVINGS

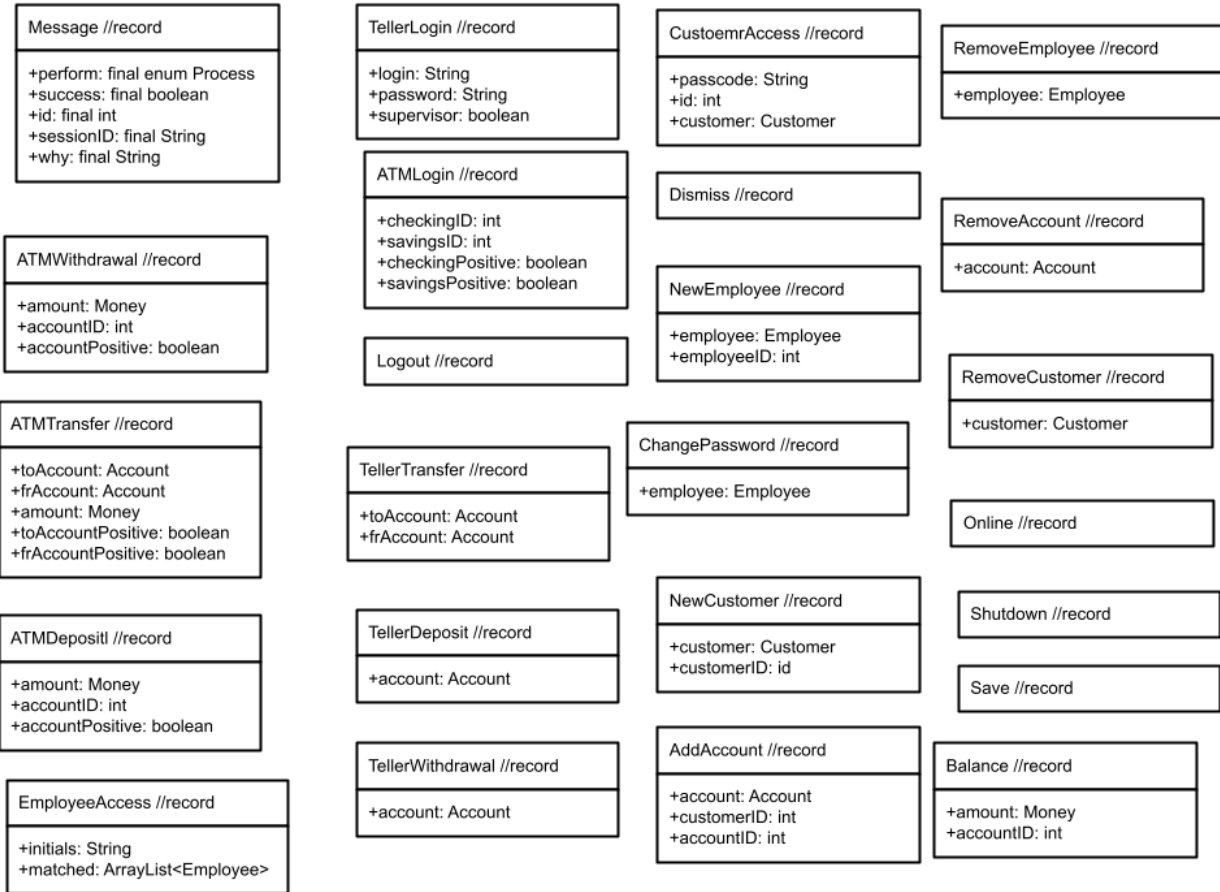
ClientType: enum
ATM Teller

Process: enum
DEPOSIT WITHDRAWAL TRANSFER BALANCE CLOSE_ACCOUNT ADD_ACCOUNT NEW_CUSTOMER CLOSE_CUSTOMER ADD_EMPLOYEE REMOVE_EMPLOYEE CHANGE_PASSWORD DIVIDEND ONLINE SHUTDOWN SAVE LOGIN LOGOUT ACCESS DISMISS

ClientInfo //record
+clientType: ClientType +customerID: int +isSupervisor: boolean



Message Solution  
(all subclasses of Message)



## Server: Client Handler

ClientHandler //in Server
<ul style="list-style-type: none"><li>-client: Socket</li><li>-validated: boolean</li><li>-clientInfo: ClientInfo</li><li>-sessionID: int</li></ul>
<ul style="list-style-type: none"><li>+run()</li><li>+validateATM(Message): Message</li><li>-logout(Logout): Logout</li><li>-customerAccess(customerAccess): customerAccess</li><li>-dismiss(dismiss): dismiss</li><li>-balance(balance): balance</li><li>-atmTransfer(atmTransfer): atmTransfer</li><li>-TellerTransfer(TellerTransfer): TellerTransfer</li><li>-atmDeposit(atmDeposit): atmDeposit</li><li>-atmWithdrawal(atmWithdrawal): atmWithdrawal</li><li>-balance(balance): balance</li><li>-dismiss(dismiss): dismiss</li><li>-online(online): online</li><li>-customerAccess(customerAccess): customerAccess</li><li>-employeeAccess(employeeAccess): employeeAccess</li><li>-shutdown(shutdown): shutdown</li><li>-save(save): save</li><li>-newEmployee(newEmployee): newEmployee</li><li>-newCustomer(newCustomer):newCustomer</li><li>-removeEmployee(removeEmployee):removeEmployee</li><li>-removeCustomer(removeCustomer):removeCustomer</li><li>-removeAccount(removeAccount):removeAccount</li><li>-changePassword(changePassword):changePassword</li></ul>