

Class Name	Method Name	Parameter	Method Intension	Input	Output	Address Functionality
	main()	None	Allow manager to input account list file path and transaction summary file path, invoke login method	account list file, transaction summary file	None	Able to run the program
	login()	None	Allow user to login and choose mode(atm, agent) and create new object, print error message	login command, mode choice	Error message	Method allow user to login and choose mode, shows error message if user inputs invalid command. (logout before login, duplicate login, etc.)
ATM	None	None	None	None	None	None
	__init__()	self, accountListFile	Allow object initialization, take account list path as parameter, and pass it to readList method	None	None	Initialization ATM object to use methods in the class
	readList()	self,fileName	Take account list file path as parameter and read the list, update accountList attribute	None	None	Read account list file for further usage
	inputConvert()	self, amount	Take user input amount as paramant, convert cent to float and return	None	None	Allow user input cent in special format such as 001
	interface()	self	Shows greeting message and allow user input command for ATM, shows error message if user input AGENT command or mistype command, terminate if logout	Function user wants to use	Greeting message, error message	Allow user to deposit, withdraw, transfer in atm mode, reject if user tries to create or delete account, shows error if mistype command, allow user to logout
	functionDeposit()	self	Allow user to deposit, verify the account and amount user typed in by calling verification methods, shows successfully deposit message if verification succeed, terminate otherwise.	Account deposit to, amount deposit	Transaction message or error message	Allow user to input the account number they want to deposit money to, and amount they want to deposit. Show error message and terminate if the verification

			Add deposit history to transaction file. Allow user to logout anytime			fails2egin2rd transaction to transaction summary file. Allo2eger to logout anytime
functionWithdraw() w()	self	Allow user to withdraw, verify the account and amount user typed in by calling verification methods, shows successfully withdraw message if verification succeed, terminate otherwise. Add withdraw history to transaction file. Allow user to logout anytime	Account withdraw from, amount withdraw	Transaction message or error message	Allow user to input the account number they want to withdraw money from, and amount they want to withdraw. Show error message and terminate if the verification fails2egin2rd transaction to transaction summary file. Allo2eger to logout anytime	
functionTransfer() )	self	Allow user to transfer, verify the account and amount user typed in by calling verification methods, shows successfully transfer message if verification succeed, terminate otherwise. Add withdraw history to transaction file. Allow user to logout anytime	Account transfer from/to, amount transfer	Transaction message or error message	Allow user to input the account number they want to transfer money from/to, and amount they want to transfer. Show error message and terminate if the verification fails2egin2rd transaction to transaction summary file. Allo2eger to logout anytime	
functionCreateAccount() count()	self	Print error message that create account is not allowed in atm mode	None	None	Restriction which create account is not allowed in atm mode	
functionDeleteAccount() count()	self	Print error message that delete account is not allowed in atm mode	None	None	Restriction which delete account is not allowed in atm mode	
functionLogout() )	self	Terminate program, write transaction summary into transaction summary file	None	(file) transactio2egin2t2ry file	Allow user logout and output transaction file when logout	

	recordTransaction()	self, transaction, account, amount	Take transaction type, account and amount as parameter, record transaction in corresponding dict for restriction which the daily deposit and withdraw amount is limited by 5000, transfer amount is limited by 10000	None	None	Record transaction history in dict for user daily limit check, 5000 for deposit, withdraw and 10000 for transfer
	verifyAccount()	self,account	Check the validate of user input account	None	Error message	Input account is invalid if length is not 7, account start with 0, or cannot find account in account list
	verifyAmount()	self, amount	Check the validate of user input amount	None	Error message	Input amount is invalid if length is smaller than 3 or greater than 8, or the input amount is in digit format
	verifyDepositAmount()	self, account, amount	Check the validate of user input deposit amount	None	Error message	Deposit amount is invalid if amount exceeds the limit of 2000 per transaction or daily limit of 5000
	verifyWithdrawAmount()	self, account, amount	Check the validate of user input withdraw amount	None	Error message	Withdraw amount is invalid if amount exceeds the limit of 2000 per transaction or daily limit of 5000
	verifyTransferAmount()	self, fromAccount, amount	Check the validate of user input transfer amount	None	Error message	Withdraw amount is invalid if amount exceeds the daily limit of 20000
	searchAccount()	self,account	Search user input account from account list	None	None	Check if user input account exist in the account list
AGENT	None	ATM	None	None	None	None
	__init__()	self, accountListFile	Inherit ATM attributes and methods	None	None	Initialization AGENT object to use methods in the class
	functionCreateAccount()	Self	Overridden ATM create account	Account number,	Create account	Allow agent to create account

			method, accept one account number input and one account name input, check the validate of the inputs. Add account to account list file and print successfully created account message if inputs are valid, otherwise print error message. Record transaction by calling transactionList append method. Allow user to logout anytime.	account name	message or error message	if inputs are valid mode if the input account name and number are valid
	functionDeleteAccount	Self	Overridden ATM delete account method, accept one account number input and one account name input, check the validate of the inputs. Delete account in account list file and print successfully delete account message if inputs are valid, otherwise print error message. Record transaction by calling transactionList append method. Allow user to logout anytime.	Account number, account name	Delete account message or error message	Allow agent to delete account in agent mode if the input account name and number are valid
	sameAccount()	self, account	Check if the account number is in the account list	None	Error message	Identify whether the user create an account which is already exist in the account list
	verifyAccountName()	Self, accountname	Check if the account name is between 3 to 30 characters, begin and end with space.	None	Error message	Check the new account name should between 3 and 30 alphanumeric characters, and not beginning or ending with a space

	verifyAccountNameForDelete()	Self, accountname	Check if the account name is between 3 to 30 characters.	None	Error message	Check the account name for delete, should between 3 and 30.
	Greeting()	Self	Overridden greeting in atm, shows special agent mode greeting message	None	Greeting message	Shows user successfully entered agent mode

Note: the program could terminate at any step by typing logout and enter functionLogout function to logout!

