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Info W18

Project Document:ATM Machine

The ATM machine implemented in this project will allow users to access the machine in order to make deposits, withdrawals and check balances. In order for the program to interact properly with the user’s demands, it should perform several specific tasks. The user can make withdrawals from the atm machine without any problems if the amount withdrawn is less than or equal to the amount that is available in the checking or savings accounts. However, if more money is drawn, warnings will be shown and the remaining balance will be shown with negative signs to reflect the amount of money owed to the bank by the customer. The customer can make deposits to the ATM machine with approval from the actual bank. For security purpose, customer authentication will be performed using name and 4 digit pin number. Using the ATM, the user can also check balances on each of his accounts. For basic functions, the ATM machine is prompted to turn on when the program is run. It is logged off when the user is finalized with his transactions and types 4 for logging off. From there he is taken to the main prompt where he can still either create an account, log back in to make further transactions, or simply quit the whole program at which the ATM machine will turn off.

With these functions in mind, several classes will need to be built. A class called Bank will act to keep a dictionary of accounts under username and pin. Another class called Accounts will act to use attributes such as the individuals’ name, pin, checking account balance, and savings account balance. A class called ATM will then serve to act as a controller to take care of monetary transactions as well as deletion of accounts. By this I mean that the ATM class will contain methods to send instructions to the Bank class to actually perform physical transactions of moving money and deleting accounts. All of these classes will interact with the main class ATM in an integrative manner showing the concept of object oriented programming.

Next Page is the implementation structure!

(Revised)Project Structure:ATM Machine

The ATM project will be implemented with the following classes:

class Bank

def create\_account(self,name, pin)

def delete\_account(self, name):

def authentification(self, name, pin):

def get\_savings\_balance(self, name):

def get\_checking\_balance(self, name):

def deposit\_savings(self, name, amount):

def deposit\_checking(self, name, amount):

def withdraw\_savings(self, name, amount):

def withdraw\_checking(self, name, amount):

class Account: #will be really short as a class!

def \_\_init\_\_(self, username, pin, checking\_balance = 0, savings\_balance = 0):

class Atm:

def make\_account(self, name, pin):

def show\_savings(self):

def show\_checking(self):

def erase\_account(self):

def login(self, name, pin):

def deposit\_savings(self, amount):

def deposit\_checking(self, amount):

def withdraw\_saving(self,amount):

def withdraw\_checkin(self,amount):

def logout(self):

def central\_window(atm):

if \_\_name\_\_ == "\_\_main\_\_":

# Initialization