Project 1 Part B

Class CreditCard {

//private variables of class

String CCNumber\_,

AcctHolderName\_;

Double balance\_;

//public functions

Constructor();

setBalance(double balance) {

balance\_ = balance;

}

getBalance() {

return balance\_;

}

setAcctHolderName(string name) {

AcctHolderName\_ = name;

}

getAcctHolderName() {

return AcctHolderName;

}

set CCNumber(string CCNumber) {

CCNumber\_ = CCNumber;

}

get CCNumber() {

return CCNumber;

}

//use luhn algorithm

Validate () {

For (int i=CCNUMBER.size();I>=0;i--)

//test to see if its first digit or second digit

If (I Mod%2 == 0)

current\_digit = current\_digit \* 2;

If current\_digit > 10 {

current\_digit = current\_digit – 9;

Else

//nothing

}

//sum all digits

For (int I = 0; I < CCNumber.size(); i++) {

total\_number = total\_number + CCNumber.at(i)

}

//test if mod 10 =0

If (sum mod 10 = true) {

Bool valid = true;

Else

Bool valid = false;

Return valid;

}

};

//Create three subclasses of each card type

Class GoldCard: public CreditCard {

Private:

Double maxbalance\_,

Rebaterate\_;

Int overdraft\_value;

Bool limit\_block;

Public:

GoldCard () {

Maxbalance\_ = 3000;

Limit\_block = true;

Rebaterate = .01;

}

};

Class PlatCard: public CreditCard {

Private:

Double maxbalance\_,

Rebaterate\_;

Int overdraft\_value;

Bool limit\_block;

Public:

GoldCard () {

Maxbalance\_ = 5000;

Limit\_block = false;

Overdraft\_value\_ = 1000;

Rebaterate = .02;

}

};

Class CorpCard: public CreditCard {

Private:

Double maxbalance\_,

Rebaterate\_;

Int overdraft\_value;

Bool limit\_block;

Public:

CorpCard () {

Maxbalance\_ = 10000;

Limit\_block = false;

Overdraft\_value\_ = 5000;

Rebaterate = .05;

}

};

Main program start ()

//step 1: handle file input from file 1 && step 2: populate array of credit cards

Filestream object FILE\_1;

File\_1.OPEN();

While (end of file not met) {

Getline();

//Step 1A: Parse string && Step 2A: Create object based on credit card type

}

//step 3: handle file input from file 2 (transactions file)

Filestream object FILE\_2;

FILE\_2.OPEN();

While (end of file 2 not met) {

Getline();

//parse transactions file

//determine card type

If (cardtype = gold)

New goldcard object[];

Goldcard[].setAcctHolderName();

Goldcard[].setbalance();

Goldcard[].setccnumber();

If (cardtype = plat)

New platcard object[];

platcard[].setAcctHolderName();

platcard[].setbalance();

platcard[].setccnumber();

If (cardtype = corp)

New corpcard object[];

corpcard[].setAcctHolderName();

corpcard[].setbalance();

corpcard[].setccnumber();

}

//step 4: iterate through transactions and check validity of card

//step 5: check type

//step 6: check balance

//step 7: check credit limit in conjunction with purchase amount

//step 8: allow or deny card