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Program 10

PURPOSE:

You work for a stock brokerage firm and your manager would like your help in determining how much money is spent in commissions to the brokers.

Prepare a stock report to help track the commissions.

VARIABLE DICTIONARY:

REPRESENTS VARIABLE

AMSE purchase commission rate amse\_pur\_rate

Commission amount commission\_amount

Commission rate commission\_rate

Exchange location exchange\_location

First name first\_name

First run switch first\_run

Last name last\_name

NYSC purchase commission rate nysc\_pur\_rate

NYSC sale commission rate nysc\_sale\_rate

Other purchase commission rate other\_pur\_rate

Other sale commission rate other\_sale\_rate

Run reply run\_reply

Salesman count salesman\_count

Total of all commissions total\_commissions

Totals switch totals\_switch

Total of all transactions total\_transactions

Transaction amount transaction\_amount

Transaction type transaction\_type

Assigned transaction type transaction\_type\_assign

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#include <iostream>

#include <string>

using namespace std;

char exchange\_location;

char run\_reply;

char totals\_switch;

char transaction\_type;

string first\_name;

string last\_name;

string transaction\_type\_assign;

int first\_run;

int salesman\_count;

double amse\_pur\_rate;

double commission\_amount;

double commission\_rate;

double nysc\_pur\_rate;

double nysc\_sale\_rate;

double other\_pur\_rate;

double other\_sale\_rate;

double total\_commissions;

double total\_transactions;

double transaction\_amount;

void setup\_function();

void input\_function();

void process\_output\_function();

void totals\_function();

int main()

{

first\_run = 'Y';

system("cls");

cout << "Do you want to run the stock report application? (Y/N) ";

cin >> run\_reply;

run\_reply = toupper(run\_reply);

while (run\_reply != 'Y' && run\_reply != 'N')

{

cout << "Error " << endl;

cout << "Enter either a Y or N " << endl;

cin >> run\_reply;

run\_reply = toupper(run\_reply);

}

system("cls");

while (run\_reply == 'Y')

{

if (first\_run =='Y')

{

setup\_function();

first\_run = 'N';

}

input\_function();

process\_output\_function();

cout << "Would you like to run another stock report? (Y/N) " << endl;

cin >> run\_reply;

run\_reply = toupper(run\_reply);

while (run\_reply != 'Y' && run\_reply != 'N')

{

cout << "Error " << endl;

cout << "Enter either a Y or N " << endl;

cin >> run\_reply;

run\_reply = toupper(run\_reply);

}

system ("cls");

}

if (totals\_switch == 'Y')

{

totals\_function();

}

}

void setup\_function()

{

amse\_pur\_rate = .035;

nysc\_pur\_rate = .045;

nysc\_sale\_rate = .025;

other\_pur\_rate = .03;

other\_sale\_rate = .02;

salesman\_count = 0;

total\_commissions = 0;

total\_transactions = 0;

totals\_switch = 'Y';

cout.setf(ios::fixed, ios::floatfield);

cout.setf(ios::showpoint);

cout.precision(2);

}

void input\_function()

{

cout << "First name: ";

cin >> first\_name;

cout << "Last name: ";

cin >> last\_name;

cout << "Transaction amount: ";

cin >> transaction\_amount;

cout << "Transaction type: (P/S) ";

cin >> transaction\_type;

transaction\_type = toupper(transaction\_type);

while (transaction\_type != 'P' && transaction\_type != 'S')

{

cout << "Error " << endl;

cout << "Enter either a P or S " << endl;

cin >> transaction\_type;

transaction\_type = toupper(transaction\_type);

}

cout << "Enter where exchange took place (N/A/O) ";

cin >> exchange\_location;

exchange\_location = toupper(exchange\_location);

while (exchange\_location != 'N' && exchange\_location != 'A' && exchange\_location != 'O')

{

cout << "Error ";

cout << "Enter either an N, A, or O ";

cin >> exchange\_location;

exchange\_location = toupper(exchange\_location);

}

system("cls");

}

void process\_output\_function()

{

salesman\_count = salesman\_count + 1;

total\_transactions = total\_transactions + transaction\_amount;

if (transaction\_type == 'P')

{

transaction\_type\_assign = "purchase";

if (exchange\_location == 'N')

{

commission\_rate = nysc\_pur\_rate;

}

else

{

if (exchange\_location == 'A')

{

commission\_rate = amse\_pur\_rate;

}

else

{

commission\_rate = other\_pur\_rate;

}

}

}

else

{

transaction\_type\_assign = "sale";

if (exchange\_location == 'N')

{

commission\_rate = nysc\_sale\_rate;

}

else

{

commission\_rate = other\_sale\_rate;

}

}

commission\_amount = transaction\_amount \* commission\_rate;

total\_commissions = total\_commissions + commission\_amount;

cout << first\_name << " " << last\_name << " has earned $" << commission\_amount << " in commissions on $" << transaction\_amount << " " << transaction\_type\_assign << " transactions." << endl;

}

void totals\_function()

{

cout << "Total salesmen processed: " << salesman\_count << endl;

cout << "Total transactions for all salesmen: $" << total\_transactions << endl;

cout << "Total commission for all salesmen: $" << total\_commissions << endl;

system("pause");

}