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Michael Dobachesky

SE 124.12

Program 1

PURPOSE:

You work for a country club and the manager has asked you to develop a program to determine the amount of dues owed by club members.

The dues are determined by the type of membership and how long a member has been with the club.

VARIABLE DICTIONARY:

REPRESENTS TYPE VARIABLE

Family membership char family\_membership

First run char first\_run

Individual membership char individual\_membership

Membership type char membership\_type

Run reply char run\_reply

Totals switch char totals\_switch

First name string first\_name

Last name string last\_name

Membership word string member\_word

Members Processed int member\_counter

Total family dues double family\_accumulator

Total individual dues double individual\_accumulator

Junior family cost double junior\_family\_cost

Junior individual cost double junior\_individual\_cost

Membership dues double membership\_dues

Senior family cost double senior\_family\_cost

Senior individual cost double senior\_individual\_cost

Years of membership double years\_member

Years until discount double years\_until\_discount

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#include <iostream>

#include <string>

using namespace std;

char family\_membership;

char first\_run;

char individual\_membership;

char membership\_type;

char run\_reply;

char totals\_switch;

string first\_name;

string last\_name;

string member\_word;

int member\_counter;

double family\_accumulator;

double individual\_accumulator;

double junior\_family\_cost;

double junior\_individual\_cost;

double membership\_dues;

double senior\_family\_cost;

double senior\_individual\_cost;

double years\_member;

double years\_until\_discount;

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 club membership dues application? (Y/N) ";

cin >> run\_reply;

run\_reply = toupper(run\_reply);

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

{

cout << "Incorrect Answer " << endl;

cout << "Please type either a Y or an N " << endl;

cin >> run\_reply;

run\_reply = toupper(run\_reply);

}

system("cls");

while (run\_reply == 'Y')

{

if (first\_run == 'Y')

{

setup\_function();

}

input\_function();

process\_output\_function();

cout << "Do you want to run the club membership application again? (Y/N) ";

cin >> run\_reply;

run\_reply = toupper(run\_reply);

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

{

cout << "Incorrect Answer " << endl;

cout << "Please type either a Y or an N " << endl;

cin >> run\_reply;

run\_reply = toupper(run\_reply);

}

system ("cls");

}

if (totals\_switch == 'Y')

{

totals\_function();

}

return 0;

}

void setup\_function()

{

totals\_switch = 'Y';

first\_run = 'N';

member\_counter = 0;

family\_accumulator = 0;

individual\_accumulator = 0;

junior\_family\_cost = 1600;

junior\_individual\_cost = 1100;

senior\_family\_cost = 1200;

senior\_individual\_cost = 800;

years\_until\_discount = 6;

}

void input\_function()

{

cout << "First Name: ";

cin >> first\_name;

cout << "Last Name: ";

cin >> last\_name;

cout << "Membership Type (F/I): ";

cin >> membership\_type;

membership\_type = toupper(membership\_type);

while (membership\_type != 'F' && membership\_type != 'I')

{

cout << "Incorrect Answer " << endl;

cout << "Please type either an F or I " << endl;

cin >> membership\_type;

membership\_type = toupper(membership\_type);

}

cout << "Years of membership: ";

cin >> years\_member;

system ("cls");

}

void process\_output\_function()

{

member\_counter = member\_counter +1;

if(membership\_type == 'F')

{

member\_word = "family";

if(years\_member > years\_until\_discount)

{

membership\_dues = 1200;

}

else

{

membership\_dues = 1600;

}

family\_accumulator = family\_accumulator + membership\_dues;

}

else

{

member\_word = "individual";

if(years\_member > years\_until\_discount)

{

membership\_dues = 800;

}

else

{

membership\_dues = 1100;

}

individual\_accumulator = individual\_accumulator + membership\_dues;

}

cout << first\_name << " " << last\_name << " is a " << member\_word << " type member and annual dues are $" << membership\_dues << endl;

}

void totals\_function()

{

cout << "Total members processed: " << member\_counter << endl;

cout << "Total family membership dues: $" << family\_accumulator << endl;

cout << "Total individual membership dues: $" << individual\_accumulator << endl;

system("pause");

}