**DEPRECIATION CALCULATOR**

**(CPE 102 EXAM PROJECT)**

**Submitted by:**

**Nguyen, Yency/Cabarce, Arth Joachim T.**

**BS Computer Engr.**

**Submitted to: Engr. Manuel C. Balasbas**

**DESCRIPTION**

Description

This program is a simple depreciation calculator and inventory list manager. It allows users to calculate the depreciation of an asset using the straight-line method and view an inventory list if desired.

**FLOWCHARTS**

Depreciation Calculation and Logging Flowchart

- Clear the screen

- Call interfaceLIST()

- Open a file "invlist.txt" for writing, write "Hello", and close the file

- Open the same file for appending, write "Hello again," and close the file

- Open the file for reading, read each line, and print to the console

YES

Want to see other listed depreciation [Y/N]?

Printcalculated depreciation

Calculate depreciation using the formula: depreciation = (I - S)/N

Call interfaceCALC()

“Initialize variable: I, S depreciation, N, what”

Input cost basis of assist(I);

Input usefull life of asset(N);

Input estimated salvage value(S);

START

Display Flowchart

END

cout<<"\n\t\t\t\t\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_";

cout<<"\n\t\t\t\t Depreciation";

cout<<"\n\t\t\t\t Inventory List";

cout<<"\n\t\t\t\t\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"<<endl;

return 0;

int interfaceCALC(){

cout<<"\n\t\t\t\t\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_";

cout<<"\n\t\t\t\t Depreciation";

cout<<"\n\t\t\t\t Inventory List";

cout<<"\n\t\t\t\t\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"<<endl;

return 0;

int interfaceLIST(){

START

If-else Flowchart

cout << "Login Successfully!";

system("pause");

END

if (dict.find(username) != dict.end() && dict[username] == password)

cout << "Invalid Credentials"<<endl;

cout<< "Try Again!"<<endl;

START

if (dict.find(username) != dict.end() && dict[username] == password)

Main Flowchart

END

cout << "Username: ";

cin >> username;

cout << "Password: ";

cin >> password;

string username;

string password;

START

**SOURCE CODE**

SOURCE CODE:

#include <iostream>

#include "depcalcmod.cpp"

using namespace std;

int main() {

interfaceCALC();

logIn();

calc();

}

#include <iostream>

#include <map>

#include <string>

#include <fstream>

#include <iomanip>

using namespace std;

void logIn() {

// create your dictionary

map<string, string> dict = { {"Yency", "Art123"} };

string username, password;

login:

cout << "Username: ";

cin >> username;

cout << "Password: ";

cin >> password;

// Check if provided username and password matches with the one is dictionary

if (dict.find(username) != dict.end() && dict[username] == password) {

cout << "Login Successfully!";

system("pause");

}

else {

cout << "Invalid Credentials"<<endl;

cout<< "Try Again!"<<endl;

goto login;

}

}

int interfaceLIST(){

cout<<"\n\t\t\t\t\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_";

cout<<"\n\t\t\t\t Depreciation";

cout<<"\n\t\t\t\t Inventory List";

cout<<"\n\t\t\t\t\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"<<endl;

return 0;

}

int interfaceCALC(){

cout<<"\n\t\t\t\t\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_";

cout<<"\n\t\t\t\t Depreciation";

cout<<"\n\t\t\t\t Calculator";

cout<<"\n\t\t\t\t\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"<<endl;

return 0;

}

int calc(){

int I, S, depreciation,N;

char what;

interfaceCALC();

cout << "Enter the cost basis of the asset: ";

cin >> I;

cout << "Enter the useful life of the asset: ";

cin >> N;

cout << "Enter the estimated salvage value: ";

cin >> S;

depreciation = ((I-S) / N); // calculating the depreciation

interfaceCALC();

cout << "Straight-line method" << endl;

cout << "The results are..." << endl;

cout << depreciation <<endl;

cout << "Would you like to see the other listed depreciation [Y/N]? ";

cin >> what;

if (what == 'Y') {

system("cls");

interfaceLIST();

fstream myFile;

myFile.open("invlist.txt", ios::out); // write

if (myFile.is\_open()) {

myFile << "Hello" << endl;

myFile.close();

}

myFile.open("invlist.txt", ios::app); // append

if (myFile.is\_open()) {

myFile << "Hello again" << endl;

myFile.close();

}

myFile.open("invlist.txt", ios::in); // read

if (myFile.is\_open()) {

string line;

while (getline(myFile, line)) {

cout << line << endl;

}

myFile.close();

}

} else if (what == 'N') {

exit(0);

} else {

system("cls");

cout << "You have entered a wrong input!" << endl;

cout << "ERROR" << endl;

}

return 0;

}

**SCREEN DISPLAY**

PROGRAM DESIGN:

