

Developing Software: Introduction

(H173 34)

Walkthru exercise 3

“Write a program in C++ that will prompt a user to enter the gross price of an item sold together with a discount rate.”

Your program is to display a sales invoice, an example is shown:

Gross Price £56.25

Discount Rate 2.5%

Discount £1.41

Discount Price £54.84

Suggested source code solution:

// Author

// Date

// Description / purpose of code

// Version

// Saved as

# include <iostream.h>

# include <iomanip.h> // library of output format manipulators

# include <conio.h>

float gross\_price, discount\_rate, discount, net\_price; // of global scope

void enter\_details\_of\_sale()

{

cout << "Enter Gross Price of item\n";

cin >> gross\_price;

cout << "Now enter the Discount Rate to be offered as a percentage value\n";

cin >> discount\_rate;

}

void discount\_and\_net\_price\_calculations()

{

discount = (gross\_price \* discount\_rate) / 100;

net\_price = gross\_price - discount;

}

void display\_receipt()

{

/\*

The output below uses format specifiers defined in the iomanip library, but it is an over-complication

Look at the simpler use of cout.precision(2); in the Walkthru2 exercise (integral to iostream.h)

\*/

// following example is without formatting

cout << "\n \n Gross Price \t \t£" << gross\_price;

cout << "\n \n Discount Rate \t \t" << discount\_rate << "%";

cout << "\n \n Discount \t \t£" << discount;

cout << "\n \n Discount Price \t£" << net\_price;

cout << endl << endl << endl;

// following example uses formatting

cout << setiosflags (ios::fixed | ios::showpoint) <<setprecision(2) /\*<<setw(9)\*/ << "\n \n Gross Price \t \t£" << gross\_price;

cout <<setprecision(1) << "\n \n Discount Rate \t \t" << discount\_rate << "%";

cout <<setprecision(2) << "\n \n Discount \t \t£" << discount;

cout << "\n \n Discount Price \t£" << net\_price;

}

int main()

{

clrscr();

enter\_details\_of\_sale();

discount\_and\_net\_price\_calculations();

display\_receipt();

getch();

return 0;

}