# Exercise 1:

#include <iostream>

#include <cmath>

using namespace std;

//declare static varables to be accessed throughout program

static int dollars, quarters, dimes, nickles, pennies;

int main(){

//input storage

double ammountDue;

double ammountReceived;

//prompt user and store value

cout << "Please enter the ammount due: " << endl;

cin >> ammountDue;

cout << "Please enter the ammount received: " << endl;

cin >> ammountReceived;

//find the differece in change

double changeDue = std::fmod(ammountReceived, ammountDue);

//round off to 2nd decimal place

changeDue = std::ceil(changeDue \* 100.0) / 100.0;

//find amount of dollars to return

int dollars = std::fmod(ammountReceived, ammountDue);

//update change left

changeDue = std::fmod(changeDue, dollars);

//find amount of quartes to return

int quarters = (changeDue\* 100)/ 25;

//update change left

changeDue = (changeDue - ((quarters \* 25) \* .01));

//find amount of dimes to return

int dimes = (changeDue \* 100) / 10;

//update change left

changeDue = changeDue - ((dimes \* 10) \* .01);

//find amount of nickles to return if applicable

if(changeDue >.04 && changeDue <.09){

nickles = (changeDue \* 100)/5;

//update change left

changeDue = changeDue - ((nickles \* 5) \* .01);

//find amount of pennies to return

pennies = (changeDue \* 100);

}

else{

//find amount of pennies to return

pennies = (changeDue \* 100) - (dimes \* 10);

}

//display results

cout << "Number of dollars due is: " << dollars << endl;

cout << "Number of quarters due is: " << quarters << endl;

cout << "Number of dimes due is: " << dimes << endl;

cout << "Number of nickles due is: " << nickles << endl;

cout << "Number of pennies due is: " << pennies;

}



A computer screen capture

Description automatically generated with low confidence