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// File name: loan.cpp
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// Class: CS150-01
// Assignment: Loan payment calculator
// Professor: Shereen Khoja
// Purpose: Computes the monthly payment for a given loan amount and a given
// interest rate
// Input: Nothing
// Output: Value of loan payment

#include <iostream>
#include "stdafx.h"

using namespace std;

int main()
{
    const double serviceCharge = 25.0; // yearly service charge for loan

    double principal; // original amount of loan
    double interestRate; // yearly interest rate
    double payment; // value of loan payment
    int numberOfPayPeriods; // number of pay periods per year

    // set the values of the variables needed to calculate the loan payment
    principal = 2000.0;
    interestRate = 0.105;
    numberOfPayPeriods = 12;

    // calculate the loan payment
    payment = (principal * (1 + interestRate) + serviceCharge) / numberOfPayPeriods;

    // output the results
    cout << "The principle is: $" << principal << endl;
    cout << "The interestrates is: $" << interestRate << endl;
    cout << "Number of pay periods= " << numberOfPayPeriods << endl;
    cout << "The service charge is: $" << serviceCharge << endl;
    cout << "Your payment will be: $" << payment << " per month" << endl;

    // indicate that the program completed successfully
    return 0;
}
```