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/* FILE NAME: .....
 * AUTHOR: Solution Briefing
 * See our syllabus for a good comment
 */

```

```

#include <iostream>
using namespace std;

```

```

int main() {
    // VARIABLE INITIALIZATION

```

➡ Properly define your variables.....
 * *

```

// CURRENCY FORMATTING
cout.setf(ios::fixed);
cout.setf(ios::showpoint);
cout.precision(2);

// USER INPUT
// NOTE: For valid input, the loan, interest, and monthly payment must
// be positive. The monthly payment must also be large enough to
// terminate the loan.
cout << "\nLoan Amount: ";
cin >> loan;

```

➡ Your program will not move forward until a positive load is entered

```

cout << "Interest Rate (% per year): ";
cin >> interestRate;

```

➡ Your program will not move forward until a positive interest rate is entered

```

// GET PROPER INTEREST RATES FOR CALCULATIONS
interestRate /= 12;
interestRateC = interestRate / 100;
cout << "Monthly Payments: ";
cin >> monthlyPaid;

```

➡ Your program will not move forward until a monthly payment is sufficient

```

cout << endl;

// AMORTIZATION TABLE
cout << "*****\n"
    << "\tAmortization Table\n"
    << "*****\n"
    << "Month\tBalance\t\tPayment\tRate\tInterest\tPrincipal\n";

// LOOP TO FILL TABLE
while (loan > 0) {
    if (currentMonth == 0) {
        cout << currentMonth++ << "\t$" << loan;

```

```

    if (loan < 1000) cout << "\t"; // Formatting MAGIC
        cout << "\t" << "N/A\tN/A\tN/A\t\tN/A\n";
    }
    else {

```



Properly calculate and display “montlypaid” and “principal” when
 (1) $\text{loan} * (1 + \text{interestRateC}) < \text{monthlyPaid}$
 and (2) $\text{loan} * (1 + \text{interestRateC}) \geq \text{monthlyPaid}$

```

    }
    cout << "*****\n";
    cout << "\nIt takes " << --currentMonth << " months to pay off "
        << "the loan.\n"
        << "Total interest paid is: $" << interestTotal;
    cout << endl << endl;
    return 0;
}

```