

## Programming Assignment: Amortization using printf

Create a new class called **Loan**. You are to write a program that prints part of an amortization table for a loan. Use the following constants:

```
public static final int PAYMENTS = 48;
public static final double RATE = 0.05;
public static final double PRINCIPAL = 20000.0;
public static final double PAYMENT = 300.0;
```

You are to write a main method that prints a heading line as follows:

```
PMT PREVIOUS INTEREST BALANCE
```

At the beginning, simply set the previous amount to the principal amount. Then create a loop that, each month, computes the interest (the rate times the previous divided by 12), computes the balance (previous plus interest minus payment), and prints the results using `printf` to make the output look correct. After printing a line, set the previous amount to the current balance. Here is what the first few lines should look like (PMT stands for “payment number”):

```
PMT PREVIOUS INTEREST BALANCE
1 20000.00 83.33 19783.33
2 19783.33 82.43 19565.76
3 19565.76 81.52 19347.29
```

For this program, you will have exactly 48 payments because the constant is set for you. This program is not correct for a number of reasons, the biggest one being that it does not compute the payment amount, it just uses whatever the `PAYMENT` constant is.

Place the file `Loan.java` on the shared drive by Tuesday, October 21.