

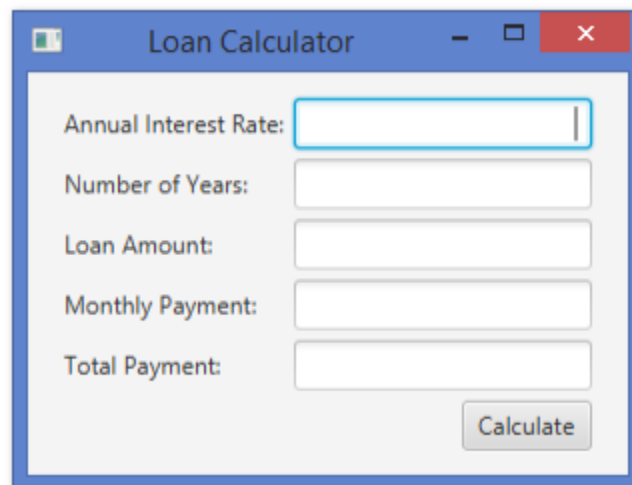
# Johns Hopkins University

## CTYOnline

### Advanced Java Programming

#### Assignment 11

In an earlier assignment, you designed a GUI interface for a loan calculator, as illustrated below. This assignment will involve revising the earlier assignment so that the calculator actually calculates the monthly payment amount and the total payment amount over the term of the loan.



The formula for computing the monthly payment ( $P$ ) is:

$$P = \frac{i * A}{1 - (1 + i)^{-n}}$$

where  $i$  = periodic interest rate,  $A$  = amount of loan,  $n$  = number of compounding periods.

For example, if the annual interest rate is 5 percent, the term of the loan is 2 years, and the loan amount is \$2,000, and interest is compounded monthly:

$$i = .05/12 = .00417 \quad n = 2 * 12 = 24 \quad P = \$87.74 \quad \text{Total Payment} = 24 * \$87.74$$

# Johns Hopkins University

## CTYOnline

### Advanced Java Programming

Please comment your code and make good use of indentation and white space.

Submit the source code (the .java file) for your program and a screen shot of the program output in a zip file named as follows: Assignment11 followed by an underscore (\_), followed by your first name initial, followed by your last name, followed by your CTYOnline student ID. For example, if your name is Jane Smith and your student ID is 999999, your zip file would be *Assignment11\_jsmith999999.zip*.