

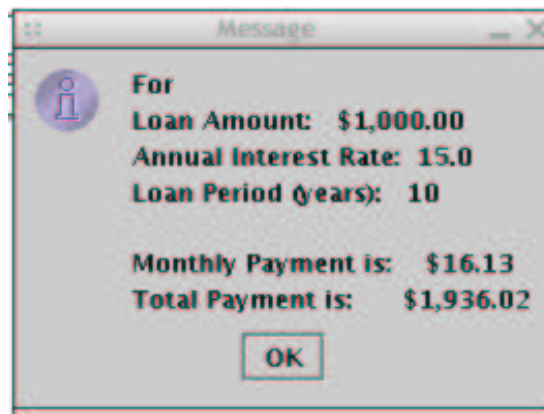
Lab 4 Project

In this lab we will study:

1. The readers Package
2. Arithmetic Operators
3. Math.pow
4. JOptionPane

Lab Project: Loan Calculator.

In this project you will construct a program which will calculate monthly payments and the total paid out for a loan. The user will enter three values: Loan amount, Annual Interest Rate, and Loan Period (years). After the user has entered these values an Information Dialog should be displayed showing the information the user entered as well as the calculated monthly payment and total paid out.



Instructions:

1. Open blueJ and create a new project.
2. Create a new main class, naming it LoanCalculator.
3. Place import statements at the top of the class:

```
import readers.DialogReader;  
import javax.swing.JOptionPane;  
import java.text.NumberFormat;
```
4. Now you must create a new DialogReader object in your main method.
5. Declare in the main method all the variables that you will need:

```
double loanAmount;  
double annualInterestRate;  
int loanPeriod;  
double monthlyPayment;  
double monthlyInterestRate;  
double totalPayment;  
int numberOfPayments;  
final int MONTHS_IN_YEAR = 12;
```
6. Use the DialogReader to get your input.
e.g. `loanAmount = reader.readDouble("Enter loan amount:");`
7. Do your computations.
8. Display the results.
e.g. `JOptionPane.showMessageDialog(null, "Results");`

Hints:

To calculate monthly payment, the formula is:

```
(loanAmount * monthlyInterestRate) /  
(1 - Math.pow(1/(1 + monthlyInterestRate), numberOfPayments));
```

To format currency use:

```
NumberFormat.getCurrencyInstance().format(monthlyPayment);
```