The Purpose of this project is to introduce event-driven programming and to practice user interaction through a graphical user interface (GUI).

**Project Overview:** Loan amortization is the process of paying off a loan in a repayment schedule. Using simple interest the cost of holding the remaining balance (amount you owe at any given time) is computed based on the number of payments per year divided into the annual interest rate.

If you borrow $100,000 at an annual interest rate of 4% (0.04) and you are making monthly payments, the amount of interest you owe, just to cover the cost of holding the principal, would be \((0.04/12) \times 100,000 = 333.33\). The amount of the monthly payment that exceeds $333.33 goes toward paying down the principal. The term of the loan is the number of years required to pay off the initial principal value.

The longer the term of the loan the more interest you must pay. The formula below can be used to determine the monthly payment required to amortize (kill off) a loan in a specified number of months. You are to write a program that computes the monthly payment or the principal given the other parameters. In the following expression, the principal amount of the loan \(P\), the annual interest rate as a percentage \(R\) (where the monthly interest \(I = R/1200\)) and the term of the loan in years \(T\), (where the number of months \(N = T \times 12\)).

\[
M = \frac{P \cdot \frac{I(1+I)^N}{(1+I)^N-1}} \quad M = \text{Monthly Payment} \\
P = \text{Mortgage Principal} \\
I = \text{Monthly Interest} \\
N = \text{Number of Months}
\]

The expression for computing the principal \(P\) given a monthly payment amount \(M\), interest \(I\) and number of payments \(N\) can be obtained algebraically. Optional tasks are to compute the number of payments and the interest rate. Iteration can be used to calculate the Interest or number of payments given the other parameters.

**Form Design:** Typically the first step in the development of a Windows application is the graphical design and layout of the form. For this project we will use a form similar to the one shown below. Variation on this theme is encouraged so long as your design provides an equivalent or greater functionality. This form shows the names of the text boxes and buttons used in this guide. Of course, you may choose any names you like, just make them relate to their purpose.