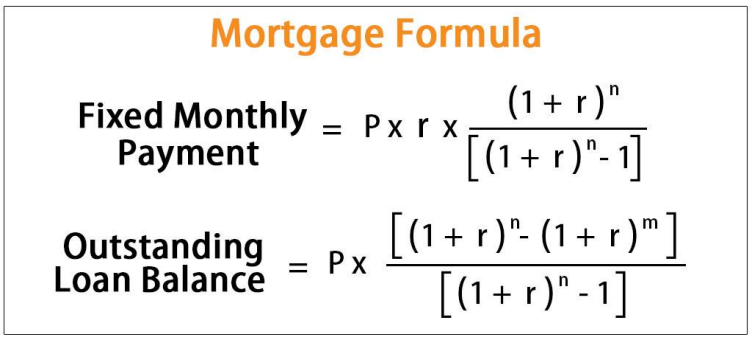
In this exercise you are going to implement a mortgage calculator.
The mortgage formula is shown below.



P = loan principal
t = tenure of loan in years
r = annual interest rate divided by 12
(12 payments per year)
n = t × 12, total number of payments
m = number of payments made

The layout of the JFrame is given to you.
The mortgage calculator has 2 versions, the basic version and the advanced version.
When the Java program is executed, the JFrame for the basic version is shown. User can switch to the advanced version by clicking on the "Adv. Mortgage Calculator" button.

In the basic version, the user enters the loan amount, the loan tenor (to repay the loan in a given number of years), and the annual interest rate (fixed rate for the loan period). The calculator will calculate the monthly payment amount.

If the user does not enter a data field, or enter invalid values, the program shows the message "Error" in the corresponding textfield(s), and clear the display of the payment field(s).

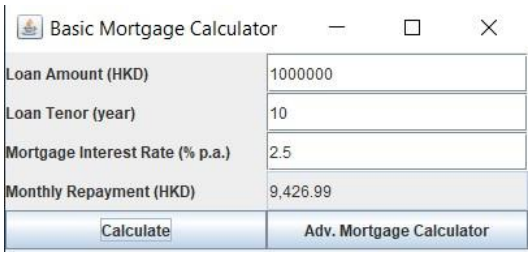
In the advanced version, the calculator will calculate the monthly payment for a loan where the interest rate for the first k (k is input by user) years is r1, and the interest rate for the remaining years is r2.

You need to implement the ActionListener to handle the action events generated by the buttons. You also need to make suitable modifications to the JFrame class such that user can switch between the basic version and the advanced version.

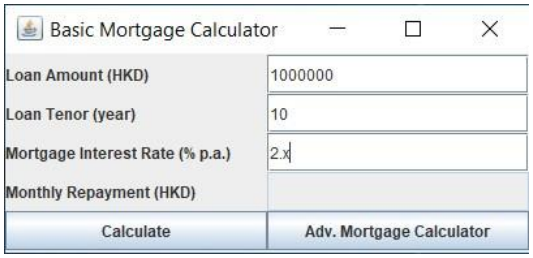
You may create a utility class where appropriate.

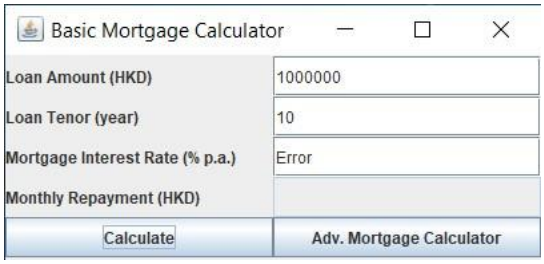
Example screenshots:

Screenshot of the basic version

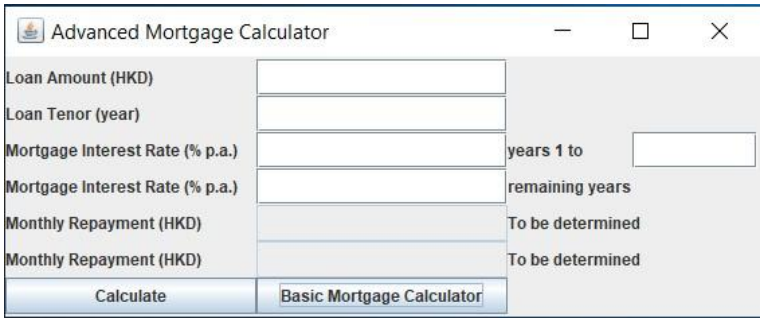


Screenshot of the basic version with input error





Screenshot of the advanced version before user inputs



Screenshot of the advanced version with monthly payments computed