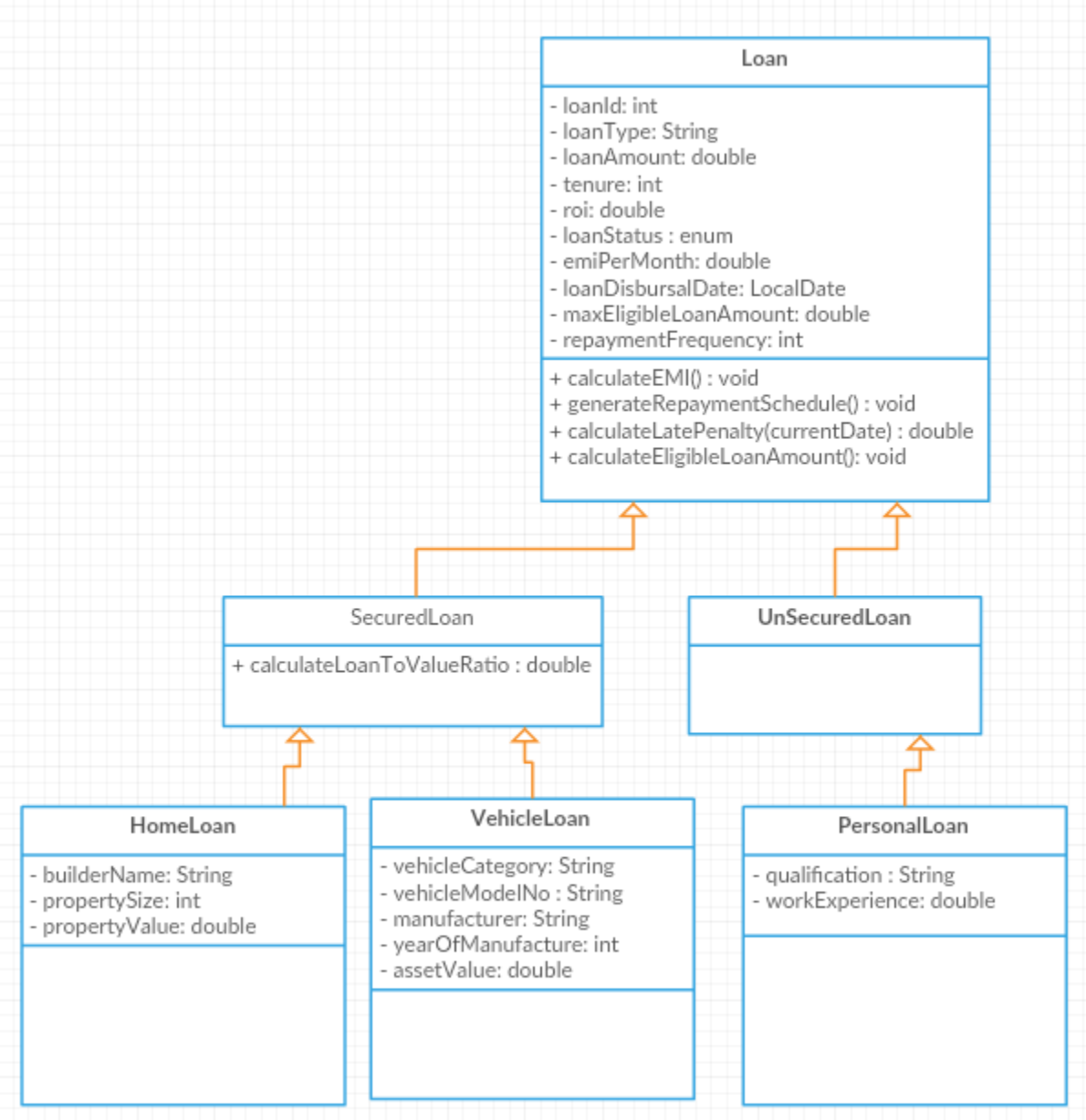
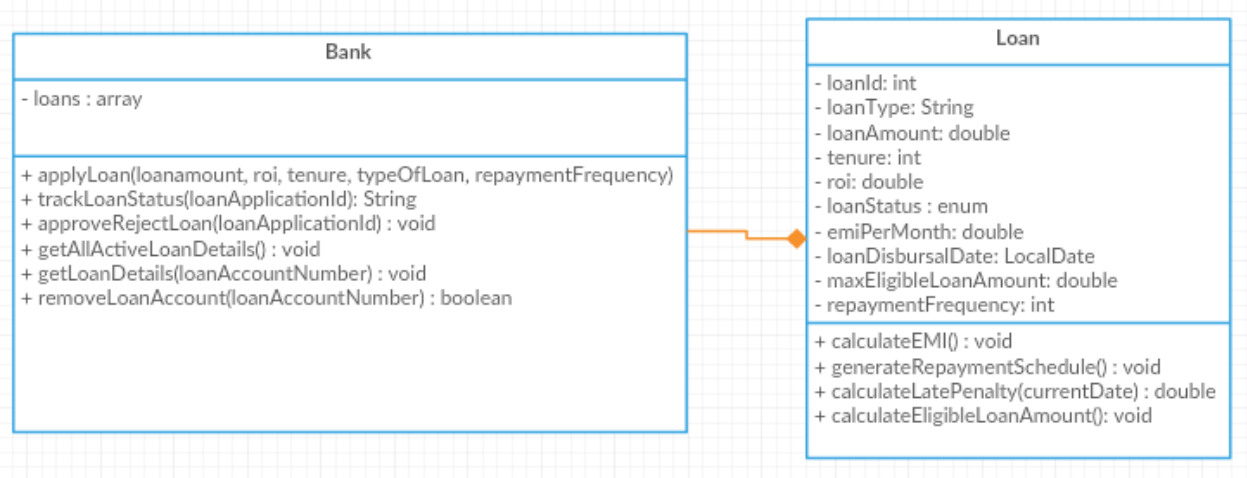
1. Extend the Loan class according to the given Class Diagram.



Override the required methods in the inherited classes and write a test class to test all the functionalities.

2. Create a Bank class and create an array of Loan in the Bank class according to the given class diagram below:



The Loan Array should be able to hold object of any of the inherited class and perform the given below functionalities:

a. applyLoan – given the loan details, the loan is applied for, loan status changes to Pending and it returns an automatically generated loan application id

b. trackLoanStatus – given a loan application id, the loan status is returned back.

c. approveRejectLoan – based on the below conditions, loan is either approved or rejected. The method returns true if the loan is approved else false.

d. getAllActiveLoanDetails - print the details of all the active loans sorted on basis of loan id

e. getLoanDetails – given a loan account number, print the details of the given loan account

f. removeLoanAccount - given a loan account number, check whether the loan status is closed. If it is closed remove the loan account from the array and return true, otherwise return false.

3. Create two interfaces – Maker and Checker.

   Maker interface has the given below functions
   a. applyLoan
   b. trackLoanStatus
   c. getAllActiveLoanDetails
   d. getLoanDetails

   Checker interface has the methods given below:

a. approveRejectLoan
b. getAllActiveLoanDetails
c. getLoanDetails
d. removeLoanAccount

Let the Bank class implement these interfaces and hold the Bank class object in Maker or Checker interface reference and call the respective methods.