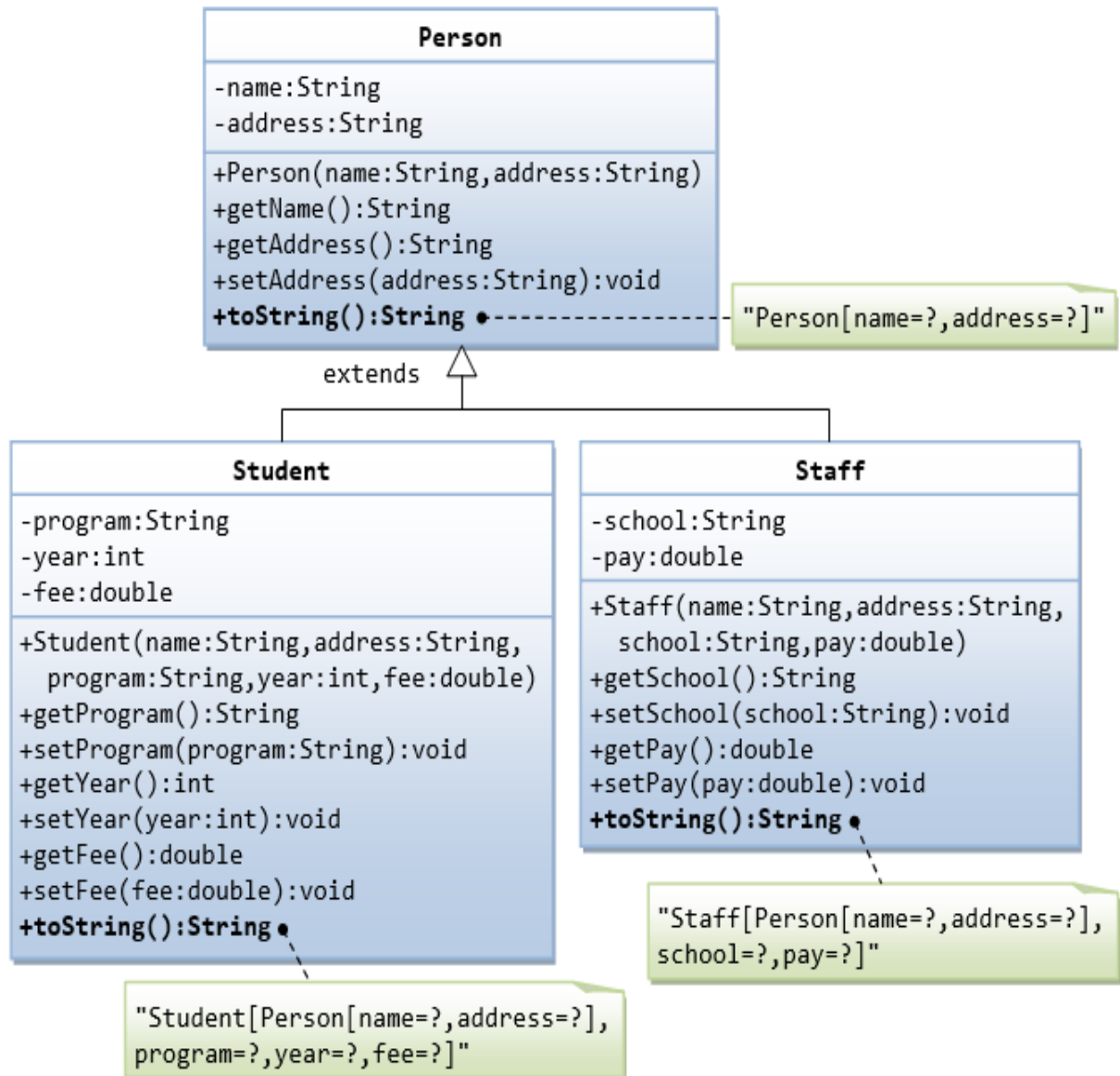
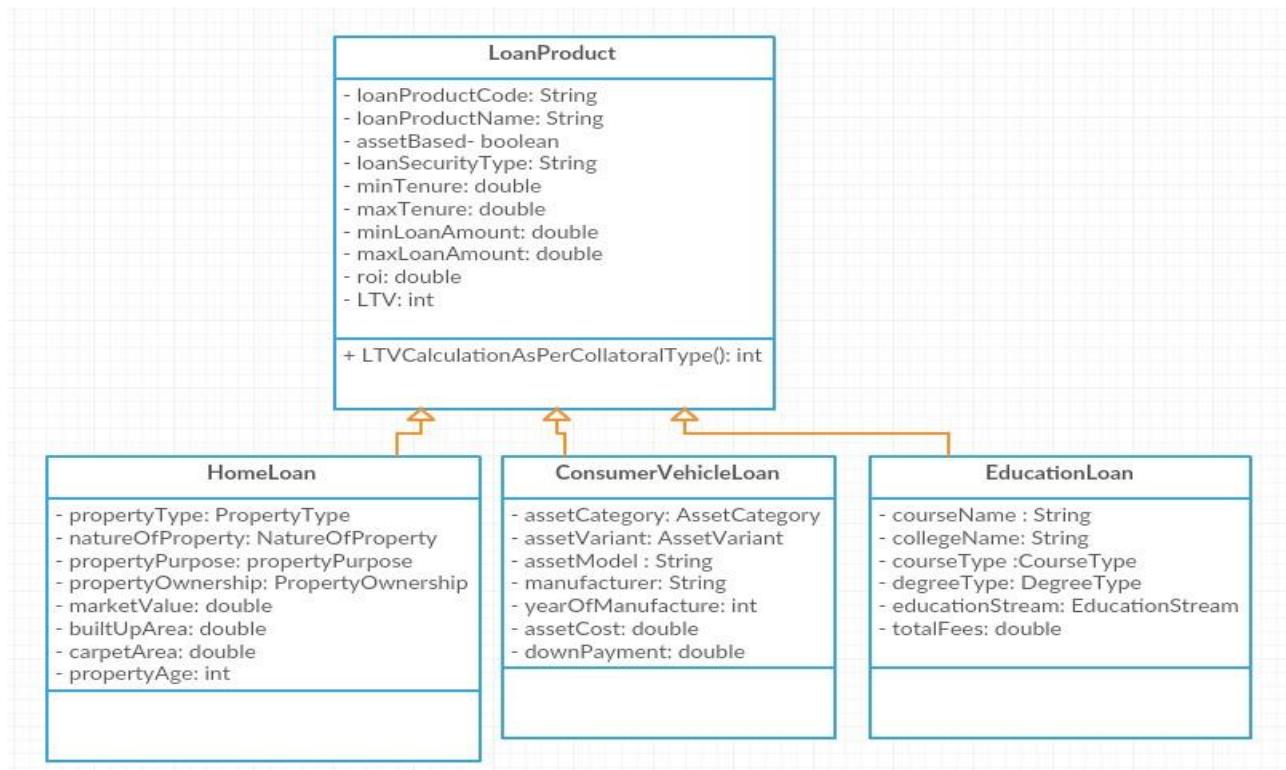


1. Create a class with a method that prints "This is parent class" and its subclass with another method that prints "This is child class". Now, create an object for each of the class and call
  - 1 - method of parent class by object of parent class
  - 2 - method of child class by object of child class
2. In the above example, declare the method of the parent class as private and then repeat the operations.
3. With the help of a demo code, explain the constructor calling sequence in multi-level inheritance.
4. Create a class 'Parent' with a method 'message'. It has two subclasses each having a method with the same name 'message' that prints "This is first subclass" and "This is second subclass" respectively. Call the methods 'message' by creating an object for each subclass.
5. Make the class 'Parent' as an abstract class and the method 'message' as abstract. Override the method in both subclasses. Call the methods 'message' by creating the reference of Parent class and storing the object of each subclass in it. Comment the findings which method got invoked when.
6. Write the classes as shown in the following class diagram.



- Mark all the overridden methods with annotation `@Override`.
- Call the constructor of **Person** class from **Student** & **Staff** class constructor using `super` keyword.
- In the overridden method, use `super` keyword to call the base class method.

7. Create the LoanProduct class hierarchy according to the given Class Diagram.



Create the required constructor and write a test class to test the functionalities.

- a. The method 'LTVCalculationAsPerCollateralType' need to be overridden in all three classes. The formula to be used is given in Assignment-1. Pass the 'LoanAmountAsked' value in the method.
  - b. Use upcasting to call this method.
8. Make the base class – LoanProduct as an abstract class and the method as an abstract method. Use upcasting to call the abstract method.