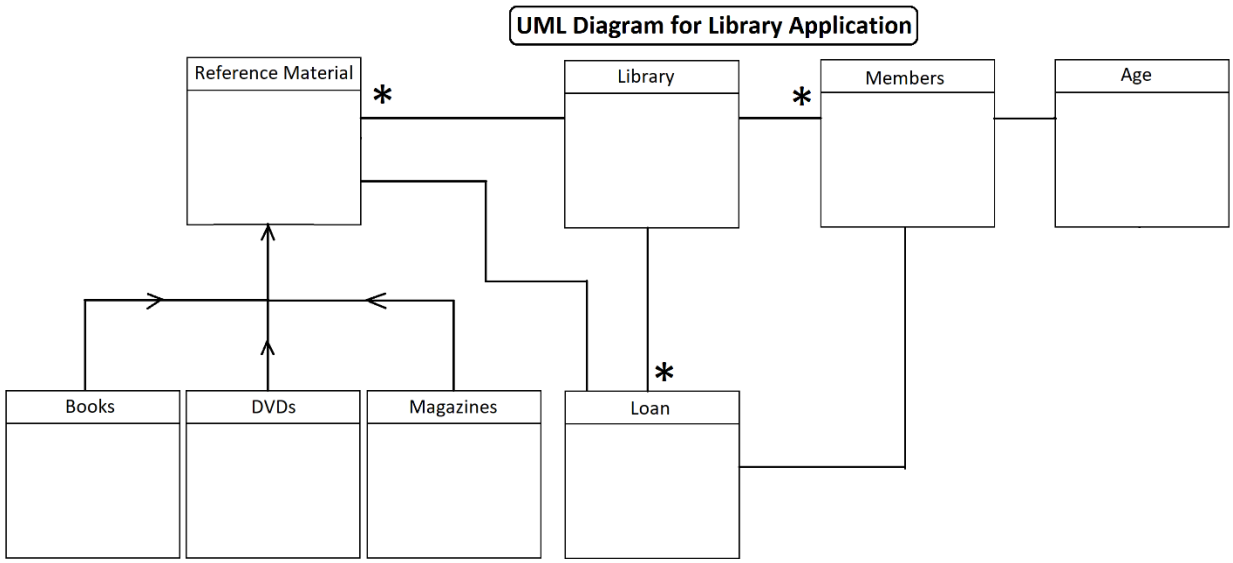
LIBRARY MANAGEMENT SYSTEM UML DIAGRAM AND CLASS DESCRIPTION :



CLASSES	DESCRIPTION
App Class :	It's the class containing the main method that contains the code to run all the other methods provided by all the classes in the program.
Library Class:	This class represents the library. Since there is only one library in our management system, all the methods under this class are class level methods, that is, they are all static methods.
Member Class :	It's the class that provides the blueprint for storing information of all the members of the library as separate objects. It also stores a field that's an instance of the Member class itself, as an adult guardian object for an under-age member.
ReferenceMaterial Class :	This class was made to set up blueprint for all the common fields shared by the instances of its child classes. This class was made abstract so as to no direct instance of this class could be made. Keeping a common parent class also helps in taking advantage of the polymorphism property offered by the Java language and make a common arraylist for all the items of the library which are instances of the child classes of this class.

Book Class:	This class extends Reference Material Class, i.e., this is one of the three child classes of the abstract class Reference Material. Since this is not an abstract class, instances of this class can be created. This child class also adds extra fields representing the information blueprint to be stored by each library item that is a book.
Magazine Class:	This class also extends Reference Material Class, i.e., this is the second of the three child classes of the abstract class Reference Material. Instances of this class are stored as objects that represent each library item that is a magazine.
DVD Class:	This class also extends Reference Material Class, i.e., this is the last of the three child classes of the abstract class Reference Material. Instances of this class are stored as objects that represent each library item that is a DVD.
Loan Class:	This class shares an aggregation relationship with both the Reference Material Class and the Member Class. This class was made to store the transaction of each item borrowed from the library by a member as a loan object.
Date/Age Class:	This class was made to hold all the Date Class related code that's required to find the age of the member, and the issue date and the return date of the item being loaned.