**Personal Library Utility Management System (PLUMS)**

**Book**

* **Properties** (choose at least 5, the other fields could be added later like an improvement/feature) **Do not do the testing Ed Do not do the testing**
  + **Primary key (integer): Book#**
  + **ISBN (Var char/String)**
  + Cover [Hard/Soft]
  + Genre [fiction, non fiction, sci-fi, fantasy, thriller, mystery, etc.]
  + Title
  + Author/Authors
  + Date
  + Notes
    - Book condition [new, fair, old, damaged outside, missing cover, missing page, missing pages, etc.]
    - Donation turns this into a Notes String type column varchar[128]

* **Methods**
  + Create Book entry (create the schema to create the tables and insert data… ]
  + Read (locate) an entry and view
  + Update (status) of a book (lost, borrowed, destroyed, damaged, given away, returned, etc.)
  + Delete (status) book (if status=destroyed/damaged,etc.)

**Reader**

* Family (internal)
  + Primary key (integer): ID#
  + Foreign key?: Reader# (like a library card Identifier)
    - Is the primary key of another table, either one to many or many to many
    - Reader and book table [
    - One reader and many books

* Full name
* Relationship [mother, cousin, grandmother, etc.]
* Address
* Family (external)
  + Full name
  + Relationship [best friend, cousin, classmate, etc.]
  + Address
* **Methods**
  + Create reading status entry
  + Read (reading status) an entry and view
  + Update (reading status) of a book (like, favorite, reading, pending, wish list, giving away, not recommended, recommended, etc.)
  + Delete (reader) of book (if reader hasn’t been actively reading or damages borrowed book (boolean) or book condition =destroyed/damaged, etc.)

**Library**

* Collection of books (List)
* Properties
  + Primary key (integer): Library ID
  + Foreign key (integer): ISBN
  + Unique key (integer) : TBA
  + Book
  + SectionID (integer or decimal or string)
  + Genre [fiction, non fiction, sci-fi, fantasy, thriller, mystery, etc.]
* **Methods**
  + Create a library entry
  + Read (library list) to browse and (maybe make a selection)
  + Update (library entry) of a book (available, borrowed, returned, returned late, unaccounted, etc.)
  + Delete (library entry) of book (if book hasn’t been located after a length of time or owner has no possession)

Library\_Book (Many to Many)

* Primary keys of the tables (book and library)
* FK: Book# from the book table
* FK: LibraryID from the library table