**Python Programming-++++++++++++++++++++++++++++++++++++++++++++++++++++**

**Final Ex**

**A.**

**Write the following classes (in different modules):**

**Class Liberary:**

Functions:

* Constructor : receives database name. number of shelves allowed

Connects to database

Create cursors for all tables.

Open or creates tables of database

Commit changes

* Print books for writer (gets a writer name and prints the books for that writer in every shelf)
* Print library (prints all library in parallel threads)
* Replace a book (receives a new book and an old book's name. replace the old book that is on the shelf with the new book)

**Tables:**

**Table books:**

Columns:

Book's name

Writer's name

Number of pages

Isbn number

**Table Shelf:**

Columns:

Letter – only writer's that their name starts with that letter will be presented on this shelf

Shelf's size – the size of the shelf in centimeters

Shelf number. There can be more than one shelf for every letter

**Table Shelves:**

Columns:

Letter & number: The key of the shelf

Book's isbn: for each book on shelf there will be a row on shelves

**Table Reader:**

Columns:

Reader's name

Reader's Id

Number of books allowed

**Table borrows:**

Columns:

Reader's Id

Book's isbn

Date taken

Program:

Write a program that presents to the user (with infinite loop):

1. Add a book (ask the user for book's details)
2. Replace a book (receives the name of the returned book and the name of the

Book that is given

1. Print books for a writer (receives the writer's name)
2. Print the entire liberaray
3. Add a reader
4. Exit the program

Write to a log file the starting time and ending time of the program

Create a log in system to the program – the user will have to insert name and password that are kept in a file