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**UNIVERSITY LIBRARY DATABASE**

**PROJECT IMPLEMENTATION:**

* We have written the program using Java and MySQL. We have taken the database of “LIBRARY” where there are tables such as STAFF\_MEMBER, LIBRARY\_MEMBER, BOOK, ISSUE\_NOTICE, ISSUE\_BOOK, CATALOG.
* In our JAVA PROJECT, there are multiple java classes taking care of validation, operation, privileges for a particular member and their activities in the library.
* We have implemented 1NF, 2NF and 3NF as per the requirements.
* We created 20 entries in “STAFF MEMBER” and “LIBRARY\_MEMBER” tables.
* In the “BOOK” table, 30 titles have been provided along with the details of the bind, language and ISBN the book is based upon.
* We have provided user interface using Java and JFRAME where user has to input their values for validation which is taken care by program.
* The Java and JFRAME conducts a set of operations that can be performed including adding new titles, renewing memberships, adding new members, returning and borrowing of books from the Library.
* CREATE STATEMENTS and TABLE DATA are included in a separate document.

**\*All the transactions from 4.1 to 4.5 and 5 have been implemented in UI.**

The following are the instances and the queries to achieve them:

3) **Write a query that will prepare a report for weekly Borrowing activity by Subject area, by Author, number of copies and number of days loaned out.**

QUERY]

select b.subject,b.author,c.rented\_copies,i.issue\_period

from book as b, issue\_book as i, catalog as c

where issue\_date BETWEEN '2015-03-09' AND '2015-03-16'

AND i.title=b.title AND i.bind=b.bind AND i.language=b.language AND i.isbn=b.isbn

AND c.title=b.title AND c.bind=b.bind AND c.language=b.language AND c.isbn=b.isbn

GROUP BY b.subject,b.author;

REFERENCES:

* [www.javatpoint.com](http://www.javatpoint.com)
* <https://examples.javacodegeeks.com/desktop-java/swing/jframe/center-jframe-jwindow-jdialog-on-screen/>
* <https://javatutorial.net/jframe-buttons-listeners-text-fields>
* <https://docs.oracle.com/en/database/oracle/oracle-database/12.2/jjdev/calling-Java-from-database-triggers.html#GUID-5C498DEF-0348-484D-AA26-2A88EF348D5C>