BIRZEIT UNIVERSITY

Faculty of Engineering and Technology

Department of Computer science

Database (COMP333)
Project #1 – Software requirements for [Virtual library]
Title: VLIB

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SUMMARY:

The project centers on building a networked virtual library database. Users of this library are able to give books and borrow them from one another. Lenders, borrowers, and supervisors make up the library. Each individual has a user account that can do this. JavaFx and MySQL will be used in the library's construction.

INTRODUCTION:

The project we are working on is unique because it is a virtual library that also lends out physical books to its users. However, as we were planning it, we ran into a problem: how would we get the books back if someone didn't return them? We had to inquire about it at the university's law center, and we came up with the idea that every book you borrow would require you to pay insurance and sign a document in addition to paying a monthly subscription to be able to borrow it.
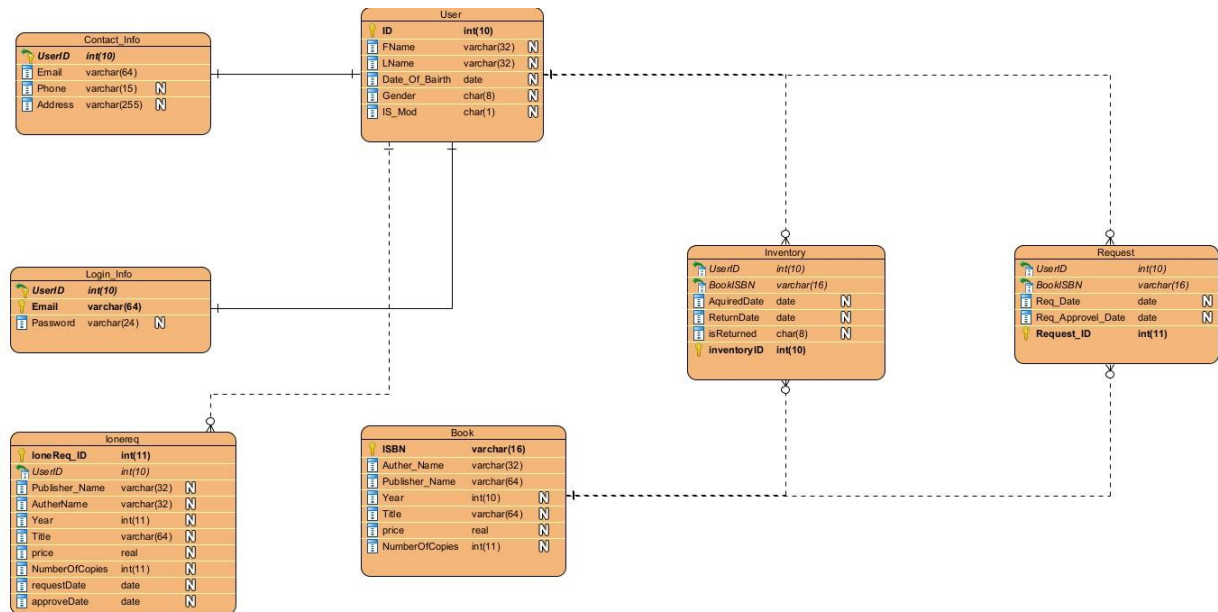
DATABASE REQUIREMENTS

Our database well require

Remember from the information your client provides, you must be able to get:

> a. User table: each user has an ID, FName, LName, Date_Of_Bairth, Gender and IS_Mod all of this is in the user table, each user has a contact_info it includes Email, phone and address, userID will be a foreign key referencing the user table as will as the loging_Info table will have the user password and his login name with his it to reference user table, each user will have an inventory it will contain book ISBN and inventory_id, acquire date and return date and userID, Request table will have a Book ISBN and userID request date and approve date plus the request date, book table will have the book info, finally we have the lone table it will contain lone_ID userID and the wanted book info the be loaned the admin can accept or reject the lone request, and he also can approve or reject a barrow request, he also can ban or see any user inventory

ER DIAGRAM:

DATA DEFINITION LANGUAGE (DDL) FOR ER DIAGRAM

```
1-CREATE TABLE User( User_ID INT(16) NOT NULL, User_FNAME VARCHAR(32)
NOT NULL,User_LNAME VARCHAR(32) NOT NULL ,User_DOB VARCHAR(12) NOT
NULL ,PRIMARY KEY(User_ID) ON DELETE CASCADE;

2-CREATE TABLE Contact_INFO( User_ID INT(16), User_EMAIL VARCHAR(32)
NOT NULL, User_PHONE INT, User_ADDRESS VARCHAR(72),FORIEGN
KEY(User_ID) ON DELETE CASCADE;

3-CREATE TABLE Login_INFO( User_ID INT(16), User_NAME VARCHAR(32) NOT
NULL, User_PASSWORD VARCHAR(16),FORIEGN KEY(User_ID) ON DELETE
CASCADE;
```

TECHNOLOGY

We are going to use in this project Windows 10. The database System is going to be MySQL, the programming language is JAVA and JAVAF.