

# Library Database Management System

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## 11. ALTER TABLE 'BOOK RETURN '

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ALTER TABLE `BOOK_RATINGS` ADD INDEX (`Ratings`); ALTER TABLE `BOOK_RATINGS`  
ADD INDEX (`Note`); ALTER TABLE `BOOK_RATINGS` ADD INDEX (`U_ID`); ALTER TABLE `  
BOOK_RATINGS` ADD INDEX (`PRIVILEGE` ); ALTER TABLE `Book_Ratings` ADD UNIQUE (`U_ID`);  
(Query took 0.2212 sec) INSERTING VALUES QUERY: INSERT INTO `LIBRARY`.`BOOK_RATINGS`  
(`ID`, `BID`, `RATINGS`, `NOTE`, `U_ID`) VALUES ('1', '1002', '4', 'GREAT STORY', '2', 'FACULTY');  
INSERT INTO `LIBRARY`.`BOOK_RATINGS` (`ID`, `BID`, `RATINGS`, `NOTE`, `U_ID`) VALUES ('2',  
'1001', '3', 'SEVEN FANTASY NOVELS', '2', 'FACULTY'); INSERT INTO `LIBRARY`.`BOOK_RATINGS`  
(`ID`, `BID`, `RATINGS`, `NOTE`, `U_ID`) VALUES ('3', '1002', '3', 'BED TIME STORIES', '3',  
'STUDENT'); INSERT INTO `LIBRARY`.`BOOK_RATINGS` (`ID`, `BID`, `RATINGS`, `NOTE`, `U_ID`,  
'PRIVILEGE') VALUES ('4', '1001', '1', 'NOT ACCEPTABLE CONCEPT', '1', 'ADMIN'); INSERT INTO  
`LIBRARY`.`BOOK_RATINGS` (`ID`, `BID`, `RATINGS`, `NOTE`, `U_ID`, `PRIVILEGE') VALUES ('5',  
'1001', '2', 'NICE STORY', '4', 'STUDENT'); DATABASE : LIBRARY.
```

1.TABLE: LOGIN Query took 0.0005 sec TABLE: BOOK\_DETAILS Query took 0.0006 sec TABLE:  
BOOK\_RATING Query took 0.0005 sec

2. DATABASE BEFORE SETTING RELATIONSHIP NG

3. DATABASE AFTER CREATING TABLE PRIVILEGE DATABASE AFTER SETTING RELATIONSHIPS 1.  
U\_ID (FK) IN TABLE BOOK\_RATING REFERENCING TO ID(PK) OF TABLE LOGIN 2. FINAL  
DATABASE.

### 11.1 QUERY OPTIMIZATION TABLE

LOGIN Q: GET ALL THE RESULTS CONTAINING ID AS 3 USERNAME AS RESHMA AND  
PRIVILEGE AS STUDENT QUERY: SEARCH QUERY TIME NO 1 SELECT \* FROM `login` WHERE `ID` =  
3; Query took 0.0005 sec 2 SELECT \* FROM `LOGIN` WHERE Query took 0.0007 sec  
`USER\_NAME` LIKE 'RESHMA' 3 SELECT \* FROM `LOGIN` WHERE Query took 0.0005 sec

``PRIVILEGE` LIKE 'STUDENT'` 4 `SELECT * FROM `LOGIN` WHERE `ID` = 1` Query took 0.0005 sec  
AND ``USER_NAME` LIKE 'RESHMA'` 5 `SELECT * FROM `LOGIN` WHERE `ID` = 3` Query took 0.0005  
sec AND ``PRIVILEGE` LIKE 'STUDENT'` 6 `SELECT * FROM `LOGIN` WHERE `ID` = 3` Query took  
0.0005 sec AND ``USER_NAME` LIKE 'RESHMA'` AND ``PRIVILEGE` LIKE 'STUDENT'` IN THE ABOVE  
CASE ALL QUERIES EXCEPT THE SECOND QUERY CAN BE CONSIDERED AS THE OPTIMISED QUERY.  
HOWEVER THE BEST OPTIMISED QUERY WILL BE THE 6TH ONE. TABLE: BOOK\_DETAILS Q:  
GETTING ALL RESULTS FOR WHICH ID AS 1001, TITLE AS HARRY POTTER, AUTHOR AS J.K  
ROWLING, KEYWORD AS WIZARD, ADVENTURES, ISBN AS 978, PUBLISHER AS CITYHILLS, AND  
YEAR OF PUBLISHING AS 2000-03-08.