

Database Lab Take Home Assignment - 5 (3 Questions, 100 Points)

Submission Deadline: 18-Nov-2021 23:59 Hours

Q1. Construct a table with the following details given below:

Marks: 60 (10 marks each)

Inventory (**PID**, PNAME, QUANTITY, PRICE)

Product (**ProdID**, PNAME, QUANTITY, STATUS, LOG)

Purchase (**ProductID**, **BNAME**, PNAME, QUANTITY, PRICE, DATE)

PID: Primary key for the table Inventory.

ProdID: Primary key for the table Product.

ProductID, BNAME: Primary keys for the table Purchase.

Note:

Inventory: This table keeps the updated record of the products.

Product: This table keeps the log of the transaction of the Inventory table.

Purchase: This table keeps the log of purchases.

- I. Write a before insert and before delete trigger on Inventory table to log the products in the Product.
- II. Write a before update trigger on Inventory table to check that Quantity and Price should not be less than '0'.
- III. Write a after delete trigger on Inventory table to remove the products having Quantity less than '0'.
- IV. Write a before insert trigger on Purchase table to check whether the product selected by the user is available or not for purchase. If available, enter an entry else show error.
- V. Extending II, also check for the quantity of the product. If available, enter an entry else show error.
- VI. Write a after insert trigger on Purchase table to update the values at Inventory table.

Q2. Construct a table with the following details given below:

Marks: 40 (5 marks each)

Employee (**EID**, **DeptID**, ENAME, PNUMBER, SALARY, DESIGNATION)

Department (**DID**, DeptNAME, NUM_OF_EMPLOYEES, HEAD_NAME, MANAGERS, WORKERS)

Post (**DESIGNATION**, NUM_OF_EMPLOYEES, TOTAL_AMOUNT)

EID, DeptID: Primary keys for the table Employee.

DID: Primary key for the table Department.

DESIGNATION: Primary keys for the table Post.

- I. Write a before insert and before delete trigger on Employee table to insert/update records in Department and Post table.
- II. Write a before insert trigger on Employee table to input custom value for column having NULL value.
- III. Extending II, also write to allow DeptID to be existing one.
- IV. Write a before delete trigger on Employee table to update values in Department and Post table.
- V. Write a before update trigger on Department table to restrict changes on NUM_OF_EMPLOYEES column.
- VI. Write a before update trigger on Department table to change value on NUM_OF_EMPLOYEES column only when there is a change in MANAGERS or WORKERS columns and update on Post table.
- VII. Write a before insert and before update trigger on Department table to use HEAD_NAME with the Employee having Designation as HEAD.
- VIII. Write a before update trigger on Post table to restrict changes on NUM_OF_EMPLOYEES column.

Note:

- I. On questions where multiple triggers on same event and table is asked, you need to modify only that part of the trigger.
- II. Create doc file and put screenshot of each query you perform in MYSQL terminal and write actual query command along with screenshots.
- III. Screenshot should include the result of query along with commands.