Date:22/11/24

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Triggers and Views

SET sql_safe_updates=0;

-- Creating WORKER Table and PRODUCT Table

USE assignment;

CREATE TABLE IF NOT EXISTS WORKER (

empId INT PRIMARY KEY,

empName VARCHAR(45),

empSalary INT,

 empDomain VARCHAR(30),

 empAge INT,

JoiningDate DATE

 );

CREATE TABLE IF NOT EXISTS PRODUCT (

productId INT PRIMARY KEY,

productName VARCHAR(30),

productQty INT,

price INT,

expireDate DATE

 );

-- Sample Insertion into WORKER Table

INSERT INTO WORKER (empId, empName, empSalary, empDomain, empAge, JoiningDate) VALUES

 (20, 'Deepak', 20000, 'RPA', 23, '2019-12-21'),

 (17, 'Kumar', 17000, 'Mech', 22, '2018-08-12'),

(10, 'Raja', 30000, 'DA', 24, '2017-07-12'),

 (13, 'Arun', 22000, 'DAT', 25, '2016-05-10'),

 (15, 'Vasanth', 32000, 'AI', 27, '2015-04-09');

INSERT INTO PRODUCT (productId, productName, productQty, price, expireDate) VALUES (10, 'Laptop', 5, 25000, '2021-12-21'),

(11, 'Ram', 6, 10000, '2022-05-18'),

(12, 'Motherboard', 4, 20000, '2021-06-10'), .

(13, 'PSU', 7, 15000, '2021-01-22');

-- ------------ TRIGGER for WORKER Table -----------

-- Trigger to log changes when the JoiningDate of a worker is updated or inserted

DELIMITER //

CREATE TRIGGER trigger_work_JoiningDate

AFTER INSERT OR UPDATE ON WORKER

FOR EACH ROW

```
BEGIN

 INSERT INTO worker_log (log_time, empId, empName, joining_date) VALUES
(CURRENT_DATE(), NEW.empId, NEW.empName, NEW.JoiningDate);

END //

DELIMITER ;
```

-- ------------ TRIGGER for PRODUCT Table ------------

-- Trigger to log changes when the expireDate of a product is updated
DELIMITER //

```
CREATE TRIGGER trigger_product_expiry

 AFTER UPDATE ON PRODUCT

FOR EACH ROW

 BEGIN

 INSERT INTO product_log (log_time, productId, productName, expireDate) VALUES
(CURRENT_DATE(), NEW.productId, NEW.productName, NEW.expireDate);

END //

DELIMITER ;
```

-- ------------ VIEWS ------------

-- View to get the worker with the earliest joining date

```
CREATE VIEW WorkerWithEarliestJoining AS

SELECT *

 FROM WORKER WHERE JoiningDate = (SELECT MIN(JoiningDate) FROM WORKER);

SELECT * FROM WorkerWithEarliestJoining;
```

-- ------------ STORED PROCEDURE for PRODUCT ------------

```
DELIMITER //
```

```sql
CREATE PROCEDURE getProductById(IN id INT)

BEGIN

 SELECT * FROM PRODUCT

WHERE productId = id;

 END //

DELIMITER ;

CALL getProductById(12);

 DELIMITER //

CREATE PROCEDURE getAllProducts()

BEGIN

SELECT * FROM PRODUCT;

END //

DELIMITER ;

CALL getAllProducts();


 DELIMITER //

CREATE PROCEDURE getExpiredProducts(IN year INT)

 BEGIN

 SELECT * FROM PRODUCT

 WHERE YEAR(expireDate) = year; END //

DELIMITER ;

 CALL getExpiredProducts(2021);
```

```sql
-- Updating product expiration dates

UPDATE PRODUCT SET expireDate = '2019-12-21' WHERE productId = 10;

UPDATE PRODUCT SET expireDate = '2018-08-12' WHERE productId = 11;

UPDATE PRODUCT SET expireDate = '2017-07-12' WHERE productId = 12;

SELECT * FROM PRODUCT;

-- Selecting from WORKER table to verify the existing records

 SELECT * FROM WORKER;

-- Select products with price less than 25000

SELECT * FROM PRODUCT WHERE price < 25000;
```