SQL Code for Trigger & Stored Procedure Implemented for Stage #5

(This code was directly input into the GCP terminal for updating the DB)

Trigger 1 : Checks if the user who is purchasing items (checking out) has provided their card details. If card details do not exist, the order is deleted.

```
DELIMITER //
CREATE TRIGGER checkCard
    AFTER INSERT ON Orders
        FOR EACH ROW
    BEGIN
        SET @cardDeets = (SELECT DISTINCT u.CardNum
                          FROM Users u NATURAL JOIN Orders o
                          WHERE o.User_ID = NEW.User_ID);
        IF @cardDeets IS NULL THEN
                DELETE FROM Orders o WHERE o.UserID = NEW.UserID;
        END IF;
    END//
DELIMITER ;
```

Stored Procedure 1: Stores the count (no of times ordered) of all recipes & ingredients in separate tables “countRecipes” & “countIngredients” – this table should be queried for top 10 etc & displayed as table/graph for helping with forecasting/inventorying purpose.

```
DELIMITER //
CREATE PROCEDURE countRecipeIngredient()
    BEGIN
        DECLARE done int default 0;
        DECLARE currrecipe INT;
        DECLARE curringr INT;
        DECLARE recipe_cur CURSOR FOR SELECT DISTINCT id FROM Recipes;
        DECLARE ingr_cur CURSOR FOR SELECT DISTINCT id FROM Ingredients;
        DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = 1;

        DROP TABLE IF EXISTS countRecipes;
        CREATE TABLE countRecipes(id INT, count INT);

        OPEN recipe_cur;
        REPEAT
            FETCH recipe_cur INTO currrecipe;
            INSERT INTO countRecipes(id, count)
            (SELECT RecipeID, COUNT(*)
            FROM Contains
            WHERE RecipeID IN (SELECT id FROM Recipes)
```

```
                GROUP BY RecipeID HAVING RecipeID =currrecipe);
            UNTIL done
            END REPEAT;
            Close recipe_cur;

            SET done = 0;

            DROP TABLE IF EXISTS countIngredients;
            CREATE TABLE countIngredients(id INT, count INT);

            OPEN ingr_cur;
            REPEAT
                FETCH ingr_cur INTO curringr;
                INSERT INTO countIngredients(id, count)
                (SELECT i.ingredient_id, COUNT(*)
                FROM Contains c JOIN Ingredients i ON c.RecipeID=i.id
                GROUP BY i.ingredient_id HAVING ingredient_id = curringr);
            UNTIL done
            END REPEAT;
            Close ingr_cur;
        END//
DELIMITER ;
```