This document is for importing SQL code to make up our project database

CREATE TABLE AUTHOR (

aID INTEGER (7) NOT NULL,

aName VARCHAR(25) NOT NULL,

rID INTEGER (7) NOT NULL,

PRIMARY KEY (aID),

FOREIGN KEY (rID) REFERENCES RECIPE(rID) ON DELETE CASCADE ON UPDATE CASCADE);

Constraints: Single role + participation for aID so every author has one unique ID, participation for rID because an author can make several recipes

CREATE TABLE RECIPE (

rID INT(7),

rName VARCHAR(30),

steps VARCHAR(2000) NOT NULL,

prepTime INT(5) NOT NULL,

cookTime INT(5) NOT NULL,

totalTime INT(5),

flavor VARCHAR(100) NOT NULL CHECK (flavor IN(“Sweet”, "Salty", "Savory", "Umami", "Sour", "Bitter", "Spicy")),

foodType VARCHAR(10) NOT NULL CHECK (foodType IN("cookie", "cake", "ice cream", "pie", "bread", "muffin", "cobbler", "misc")),

reviews INTEGER(5),

calorie INTEGER(5),

allergy VARCHAR(100),

PRIMARY KEY (rID));

Constraints: The RECIPE table contains constraints to make sure the flavor matches a known in the system and if foodType matches a known in the system.

ALTER TABLE RECIPE

MODIFY COLUMN allergy VARCHAR(100) NOT NULL;

ALTER TABLE RECIPE

MODIFY COLUMN prepTime int(5);

ALTER TABLE RECIPE

MODIFY COLUMN cookTime int(5);

ALTER TABLE RECIPE

MODIFY COLUMN totalTime int(5);

CREATE TABLE LISTED (

iName VARCHAR(25),

rID INTEGER (7),

PRIMARY KEY (iName, rID),

FOREIGN KEY (iName) REFERENCES INGREDIENTS (iName) ON DELETE CASCADE ON UPDATE CASCADE,

FOREIGN KEY (rID) REFERENCES RECIPE (rID) ON DELETE CASCADE ON UPDATE CASCADE);

CREATE TABLE TOOLS (

tName VARCHAR(25),

tType VARCHAR(25) NOT NULL,

description VARCHAR(2000) NOT NULL,

PRIMARY KEY (tName)

);

CREATE TABLE USETOOL (

tName VARCHAR(25) NOT NULL,

mName VARCHAR(25) NOT NULL,

PRIMARY KEY (mName, tName),

FOREIGN KEY (tName) REFERENCES TOOLS(tName) ON DELETE CASCADE ON UPDATE CASCADE,

FOREIGN KEY(mName) REFERENCES METHOD(mName) ON DELETE CASCADE ON UPDATE CASCADE

);

CREATE TABLE METHOD (

mName VARCHAR(25),

description VARCHAR(2000) NOT NULL,

PRIMARY KEY (mName)

);

CREATE TABLE INGREDIENTS (

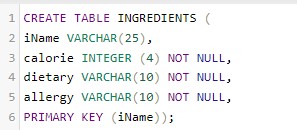
iName VARCHAR(25),

calorie INTEGER (4) NOT NULL,

dietary VARCHAR(100) NOT NULL,

allergy VARCHAR(100) NOT NULL,

PRIMARY KEY (iName));



\*changed varchar variable field to 100 instead of 10

ALTER TABLE INGREDIENTS

MODIFY COLUMN dietary VARCHAR(100) NOT NULL;

ALTER TABLE INGREDIENTS

MODIFY COLUMN allergy VARCHAR(100) NOT NULL;

ALTER TABLE INGREDIENTS

MODIFY COLUMN calorie INT(4);

CREATE TABLE USEINGREDIENT (

mName VARCHAR (25),

iName VARCHAR (25),

P

FOREIGN KEY (mName) REFERENCES METHOD (mName) ON DELETE CASCADE ON UPDATE CASCADE,

FOREIGN KEY (iName) REFERENCES INGREDIENTS (iName) ON DELETE CASCADE ON UPDATE CASCADE

);

CREATE TABLE REVIEWED (

date DATE,

rID INTEGER (7),

revID INTEGER (7),

PRIMARY KEY(rID, revID),

FOREIGN KEY (rID) REFERENCES RECIPE (rID) ON DELETE CASCADE ON UPDATE CASCADE,

FOREIGN KEY (revID) REFERENCES REVIEWER (revID) ON DELETE CASCADE ON UPDATE CASCADE

);

Constraints: Single role + participation for reviewer\_ID so every reviewer has one unique ID, participation for rID because an reviewers can review multiple rechipes

CREATE TABLE REVIEWER (

revID INTEGER(7),

revName VARCHAR(25) NOT NULL,

PRIMARY KEY(revID)

);

CREATE TABLE LEGACYRECIPE (

lrID INT(7),

rName VARCHAR(30),

steps VARCHAR(2000),

prepTime INT(5),

cookTime INT(5),

totalTime INT(5),

flavor VARCHAR(6),

foodType VARCHAR(10),

reviews INT(5),

calorie INT(5),

allergy VARCHAR(100),

dateRemoved DATE;

PRIMARY KEY (lrID));

ALTER TABLE LEGACYRECIPE (

MODIFY COLUMN allergy VACHAR(100);

ALTER TABLE LEGACYRECIPE

ADD COLUMN dateRemoved DATE;

ALTER TABLE LEGACYRECIPE

MODIFY COLUMN prepTime int(5) NOT NULL;

ALTER TABLE LEGACYRECIPE

MODIFY COLUMN cookTime int(5) NOT NULL;

ALTER TABLE LEGACYRECIPE

MODIFY COLUMN totalTime int(5));

**TRIGGERS**

CREATE TRIGGER TotalTimeInsert

BEFORE INSERT ON RECIPE

FOR EACH ROW

SET New.totalTime = New.prepTime + New.cookTime

CREATE TRIGGER SaveRecipe

BEFORE DELETE ON RECIPE

FOR EACH ROW

INSERT INTO LEGACYRECIPE (lrID, rName, steps, prepTime, cookTime, totalTime, flavor, foodType, reviews, calorie, allergy) VALUES (Old.rID, Old.rName, Old.steps, Old.prepTime, Old.cookTime, Old.totalTime, Old.flavor, Old.foodType, Old.reviews, Old.calorie, Old.allergy)

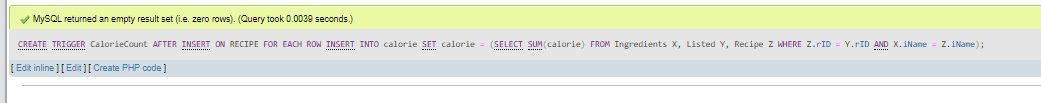
Time Stamp on legacy recipe --> Go into the gui and change default value for dateremoved in the legacy table to current date in the dropdown box

[CREATE](https://csdb.brockport.edu/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/create-trigger.html) [TRIGGER](https://csdb.brockport.edu/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/create-trigger.html) CalorieInfo AFTER [INSERT](https://csdb.brockport.edu/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/insert.html) ON RECIPE FOR EACH ROW [update](https://csdb.brockport.edu/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/update.html) RECIPE [set](https://csdb.brockport.edu/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/set.html) calorie = ([SELECT](https://csdb.brockport.edu/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [SUM](https://csdb.brockport.edu/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_sum)(i.calorie) from recipe R, ingredients I, Listed L, inserted J where R.rID=l.rID [and](https://csdb.brockport.edu/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html%23operator_and) L.iName=I.iName [and](https://csdb.brockport.edu/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html%23operator_and) r.rID = J.rID) where rID = ([select](https://csdb.brockport.edu/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) rID from inserted);

CREATE TRIGGER `AllergyInfo` AFTER INSERT ON `RECIPE`

FOR EACH ROW update RECIPE set allergy = (SELECT STRING\_AGG (i.allergy, ', ')

from recipe R, ingredients I, Listed L, inserted J where R.rID=l.rID and L.iName=I.iName and r.rID = J.rID) where rID = (select rID from inserted)



CREATE TRIGGER AllergyInfo

AFTER INSERT ON RECIPE

FOR EACH ROW

UPDATE RECIPE SET allergy = (SELECT STRING\_AGG (i.allergy, ', ')

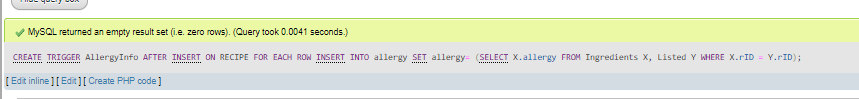
FROM recipe R, ingredients I, Listed L, inserted J

WHERE R.rID=l.rID

AND L.iName=I.iName and r.rID = J.rID) where

rID = (select rID from inserted)

After inserting a new recipe, allergy is empty initially, look at listed table with the rID look for ingredient names and insert into the allergy attribute into the recipe table



BEFORE --> go into recipe and change default value for reviews to 0 instead of null (custom default value, type 0)

CREATE TRIGGER ReviewCount

AFTER INSERT ON REVIEWED

FOR EACH ROW

UPDATE RECIPE SET reviews = reviews+1 WHERE rID = New.rID

CREATE TRIGGER ReviewAdjust

AFTER DELETE ON REVIEWED

FOR EACH ROW

UPDATE RECIPE SET reviews = reviews-1 WHERE rID = Old.rID

VIEWS

SELECT rID, rName

FROM recipe

WHERE allergy='milk' AND calorie > 350 //lists recipe id and recipe name where allergy is milk and calorie count is > 350

SELECT mName

FROM USETOOL

WHERE tName='spoon' // list baking methods where spoon is being used

Graphical user interface, text, application

Description automatically generated

SELECT X.revName, Y.rName

FROM Reviewer X, Recipe Y, Reviewed Z

WHERE Z.rID = Y.rID AND Z.revID = X.revID // lists the name of the reviewers who have reviewed the specific recipe(

Graphical user interface, text, application

Description automatically generated

SELECT rName, totalTime

FROM RECIPE

WHERE totalTime < 60 // recipes where food was made in less than an hour

Graphical user interface, text, application

Description automatically generated

SELECT DISTINCT X.rID, X.rName, Y.iName

FROM RECIPE X, INGREDIENTS Y, Listed Z

WHERE X.rID = Z.rID AND Z.iName = Y.iName AND Y.dietary = ‘Dairy' //Shows ingredients in recipes where the dietary contains Dairy

Graphical user interface, text, application

Description automatically generated

SELECT DISTINCT Z.rID, X.rName

FROM RECIPE X, INGREDIENTS Y, LISTED Z

WHERE X.rID = Z.rID AND Z.iName='Water';

Graphical user interface, text, application

Description automatically generated

SELECT Y.rName,COUNT(DISTINCT X.iName)

FROM Listed X. RECIPE Y

WHERE X.rID = Y.rID

GROUP BY X.rID //Counts the number of ingredients in the recipes

(literally 3 ingredients per recipe)

Graphical user interface, application

Description automatically generated

**DATA TO BE ENTERED IN TABLES:**

**INGREDIENTS TABLE**

INSERT INTO INGREDIENTS

(iName, calorie, dietary, allergy)

VALUES

("Flour", 5, "N/A", "Wheat Allergy"),

("Milk", 10, "Contains Dairy", "Lactose"),

("Sugar", 15, "High sugar", "Keyboard"),

("Eggs", 5, "Contains animal products", "Aquaphor"),

("Vanilla Extract", 10, "N/A", "Baking goods"),

("Baking Soda", 2, "N/A", "Candle"),

("Water", 1, "Hope not", "N/A"),

("Vegetable Oil", 7, "Oil Product", "Vegetables"),

("Condensed Milk", 15, "Contains Dairy", "Lactose"),

("Coconut Milk", 9, "Dairy Alternative", "Coconuts"),

("Honey", 8, "High Sugar", "Bees"),

("Yeast", 5, "Yeast Intolerance", "Bread"),

("Cheese", 10, "Contains Dairy", "Lactose"),

("Baking Powder", 8, "Hope Not", "Baking"),

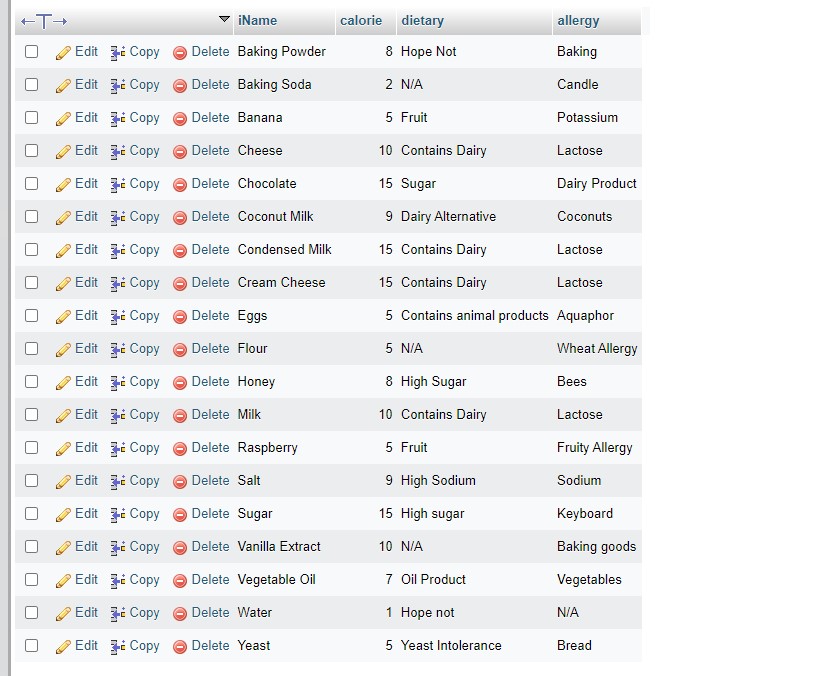
("Salt", 9, "High Sodium", "Sodium"),

("Chocolate", 15, "Sugar", "Dairy Product"),

("Banana", 5, "Fruit", "Potassium"),

("Cream Cheese", 15, "Contains Dairy", "Lactose"),

("Raspberry", 5, "Fruit", "Fruity Allergy")



**AUTHOR TABLE**

INSERT INTO AUTHOR (aID, aName, rID) VALUES

(123, "ERosey", 001),

(124, "Martha Stewart", 002),

(125, "Guy Corvette", 003),

(126, "Gordon Ramsey", 004),

(127, "Rachel Ray", 005),

(128, "Steve Pike", 006);

**RECIPE TABLE:**

INSERT INTO RECIPE (rID, rName, steps, prepTime, cookTime, flavor, foodType)

VALUES

(002, "Banana Bread", "1. Preheat", 15, 60, "Sweet", "Bread")

INSERT INTO RECIPE (rID, rName, steps, prepTime, cookTime, flavor, foodType)

VALUES

(

001, "Banana Bread", "1. Preheat the oven to 350 degrees F (175 degrees C). Lightly grease a 9x5-inch loaf pan. / 2. Combine flour, baking soda, and salt in a large bowl. Beat brown sugar and butter with an electric mixer in a separate large bowl until smooth. Stir in eggs and mashed bananas until well blended. Stir banana mixture into flour mixture until just combined. Pour batter into the prepared loaf pan. / 3. Bake in the preheated oven until a toothpick inserted into the center comes out clean, about 60 minutes. Let bread cool in pan for 10 minutes, then turn out onto a wire rack to cool completely.", 15, 60, NULL, "Sweet", "Bread", NULL, NULL, NULL

),

(

002, "Vanilla Cupcakes", "1. Preheat the oven to 350 degrees F. Line a 12-cup muffin pan with paper liners. Whisk the flour, baking powder and salt in a bowl. Beat the butter and sugar in a stand mixer fitted with the paddle attachment on medium-high speed until fluffy, about 4 minutes. Beat in the eggs, one at a time, scraping down the bowl as needed. Beat in the vanilla. Reduce the mixer speed to medium low; beat in half of the flour mixture, then all of the milk, then the remaining flour mixture until just combined. / 2. Divide the batter among the muffin cups, filling each three-quarters full. Bake until a toothpick inserted into the center of a cupcake comes out clean, 18 to 20 minutes, rotating the pan halfway through. Transfer the pan to a rack and let cool 5 minutes, then remove the cupcakes to the rack to cool completely. Top with Frosting. / 3. Whisk the egg whites, sugar and salt in a heatproof bowl set over a saucepan of simmering water (do not let the bowl touch the water) until the mixture is warm and the sugar dissolves. Remove the bowl from the pan; let cool slightly. / 4. Beat the egg white mixture in a stand mixer fitted with the whisk attachment (or with a hand mixer) on medium-high speed until stiff peaks form, 12 to 15 minutes. Beat in the butter a few pieces at a time, then continue beating until smooth.", 10, 15, "Sweet", "Cupcake"

),

(

003, "Cheesecake", "1. Position a rack in the middle of the oven and preheat to 350 degrees F. / 2. To make the crust: In a small bowl, mix the cracker crumbs with the melted butter and the sugar together until evenly moistened. Press the crumb mixture onto the bottom of a 9-inch springform pan. Bake the crust until golden brown, about 10 to 12 minutes. Cool the pan on a rack. / 3. Lower the oven temperature to 325 degrees F. In the bowl of a standing mixer fitted with the paddle attachment, or with a hand-held mixer, cream the cream cheese on medium speed until smooth. Gradually add the sugar and beat until light and fluffy. (Stop mixing and scrape down the sides of the bowl and beaters as needed.) Beat in the sour cream. Add the eggs, one at a time, beating well after each addition. Stir in the vanilla and cream. Pour the batter into the prepared pan. / 4. Bake until the top of the cheesecake is lightly browned, but the center still jiggles slightly, about 45 minutes. Cool the cake in the pan on a rack. Cover with plastic wrap and refrigerate overnight before serving. / 5. To remove the cake from the pan, run a knife or offset spatula around the edges to release the edges from the pan. Open the springform pan and remove the ring. / 6. Cut the cheesecake into wedges and serve with berries or a raspberry sauce if desired.", 30, 65, "Sweet", "Cake"

),

(

004, "Blueberry Muffins", "1. Preheat oven to 380 degrees F. / 2. In a large bowl sift together the flour, baking soda, baking powder, and salt and set aside. / 3. In another large bowl, whisk together the sugar, oil, egg and yogurt. Add the dry ingredients reserving 1 tablespoon of the dry ingredients and toss with the blueberries. Stir mixture for a count of 10. Add 1 cup blueberries to mixture and stir 3 more times. Reserve the 1/2 cup of blueberries. / 4. Using a #20 ice cream scoop, add the mixture to greased muffin pans. Sprinkle the remaining 1/2 cup of berries on top of muffins and press down lightly. Place into the oven and increase the temperature to 400 degrees. Bake for 20 to 25 minutes, rotating pan halfway through. Remove from oven and turn out, upside down on tea towel to cool completely. Serve immediately or store in airtight container for 2 to 3 days.", 10, 15, "Sweet", "Muffin"

),

(

005, "Lemon Bars", "1. Make the crust: Position a rack in the middle of the oven and preheat to 350 degrees F. Grease a 9-by-13-inch pan with vegetable oil and line with foil, leaving a 2-inch overhang on all sides; grease the foil with oil. Pulse the butter, flour, both sugars and the salt in a food processor until the dough comes together, about 1 minute. Press evenly into the bottom and about 1/2 inch up the sides of the prepared pan, making sure there are no cracks. Bake until the crust is golden, about 25 minutes. / 2. Meanwhile, make the filling: Whisk the whole eggs and yolks, sugar and flour in a bowl until smooth. Whisk in the lemon zest and juice. Remove the crust from the oven and reduce the temperature to 300 degrees F. Pour the filling over the warm crust and return to the oven. Bake until the filling is just set, 30 to 35 minutes. / 3. Let the bars cool in the pan on a rack, then refrigerate until firm, at least 2 hours. Lift out of the pan using the foil and slice. Dust with sugar before serving.", 15, 60, "Tangy", "Fruit"

),

(

006, 'Mixed Fruit Tart', '1. For the crust: In a large bowl, beat together the butter and sugar with an electric mixer on medium-high speed until light and fluffy, about 3 minutes. Add the salt, egg and cream; beat until incorporated. Add the flour and beat until a dough comes together. Form the dough into a disc and then press it evenly into the bottom and up the sides of a 10-inch tart pan with a removable bottom; if necessary, use a piece of plastic wrap to help keep the dough from sticking. Refrigerate until firm, about 1 hour, or freeze for 30 minutes. / 2. Preheat the oven to 350 degrees F. Line the tart crust with foil and fill with pie weights. Bake until the edges of the crust look set and just barely golden, about 15 minutes. Carefully remove the foil and pie weights, and continue to bake until the crust is golden brown all over, about 20 minutes more. Cool completely. / 3. For the filling: In a large bowl, combine the cream cheese, sugar and vanilla, and beat with an electric mixer until soft and very creamy, 1 to 2 minutes. Add the cream and continue beating until the mixture holds stiff peaks, stopping occasionally to scrape the bowl with a rubber spatula, 2 to 3 minutes more. / 4. Spoon the cream cheese mixture into the cooled tart shell and smooth with an offset spatula. Top with the berries. / 5. Combine the apricot preserves and a splash of water in a small bowl and microwave until warm, about 45 seconds. Strain through a sieve into another bowl. Gently brush or spoon the apricot glaze over the berries.', 45, 75, 'Tart', 'Fruit’

);

**TOOL TABLE:**

INSERT INTO TOOLS (tName, tType, description)

VALUES

(

'Measuring cups', 'Utensil', 'Measuring cups with following sizes: 1/4 cup, 1/3 cup, 1/2 cup, 1 cup'

),

(

'Spoon', 'Utensil', 'Used to stir things'

),

(

'Spatula', 'Utensil', 'Used to flip things'

),

(

'Whisk', 'Utensil', 'Used to mix things'

),

(

'Rolling Pin', 'Utensil', 'Used to roll crust and other food to be flat'

),

(

'Knife', 'Utensil', 'Used to cut things'

),

(

'Cake Pan', 'Pan', 'Put cakes in this to bake'

),

(

'Baking Sheet', 'Pan', 'Put food on this and bake'

),

(

'Hand Mixer', 'Utensil', 'Makes mixing ingredients easier'

),

(

'Pie Plate', 'Pan', 'Put pies on this to bake'

),

(

'Tart Pan', 'Pan', 'Used to hold tarts'

);

**LISTED TABLE:**

INSERT INTO LISTED(iName, rID)

VALUES

('Banana', 001), ('Flour', 001), ('Sugar', 001), ('Sugar', 002), ('Vanilla Extract', 002),('Water', 002), ('Cream Cheese', 003), ('Eggs', 003), ('Sugar', 003), ('Baking Soda', 004), ('Baking Powder', 004), ('Salt', 004), ('Flour', 005), ('Eggs', 005), ('Sugar', 005), ('Water', 006), ('Sugar', 006), ('Flour', 006);

**REVIEWER TABLE:**

INSERT INTO REVIEWER(revID, revName)

VALUES

(010, 'John Doe'),

(020, 'Morgan Freeman'),

(030, 'Guy Fieri'),

(040, 'Beyonce'),

(050, 'Betty White'),

(060, ‘George Washington’);

**REVIEWED TABLE:**

INSERT INTO REVIEWED(date, rID, revID) VALUES

('2020-01-01', 001, 010),

('2020-04-03', 002, 060),

('2021-05-14', 003, 040),

('2022-08-04', 004, 030),

('2022-09-04', 005, 020),

('2019-07-11', 006, 050);

**METHOD:**

INSERT INTO METHOD(mName, description) VALUES

(‘Stir’ , ‘Grab a spoon and move it in a circular motion to mix ingredients together’),

(‘Measure’ , ‘Grab a measuring cup of the preferred size and pour in ingredients’),

(‘Flip’ , ‘Grab a spatula, shove it under whatever you want to flip and turn it to the opposite side’),

(‘Mix’ , ‘Grab a hand mixer, put the metal looking part into a bowl of ingredients, and turn it on to mix the ingredients’),

(‘Whisking’ , ‘Grab a whisk, and move in a very quick circular motion to mix ingredients’),

(‘Roll’ , ‘Grab a rolling pin, put it on the crust or the food that you want to be flat, and move it back and forth’),

(‘Cut’ , ‘Grab a knife, make sure the sharp part is facing the particular thing you want to cut, and move it down vertically to cut’),

(‘Placing’ , ‘Put pies on pie plate to bake pies’),

(‘Food baking’ , ‘Put food on baking sheet to bake food’),

(‘Cake baking’ , ‘Put cakes into cake pan to bake cakes’),

(‘Hold tarts’ , ‘Put tarts into tart pan to hold tarts’);

**USE TOOL:**

INSERT INTO USETOOL (tName, mName) VALUES(

(‘Spoon’ , ‘Stir’),

(‘Measuring cups’ , ‘Measure’),

(‘Spatula’ , ‘Flip’),

(‘Hand Mixer’ , ‘Mix’),

(‘Whisk’ , ‘Whisking’),

(‘Rolling Pin’ , ‘Roll’),

(‘Knife’ , ‘Cut’),

(‘Pie Plate’ , ‘Placing’),

(‘Baking Sheet’ , ‘Food baking’),

(‘Cake Pan’ , ‘Cake baking’),

(‘Tart Pan’ , ‘Hold tarts’))

***Test Data***

**INGREDIENTS**

|  |  |  |  |
| --- | --- | --- | --- |
| ***iName*** | ***Calorie*** | ***Dietary*** | ***Allergy*** |
| Flour | 5 | N/A | Wheat Allergy |
| Milk | 10 | ***Contains Dairy*** | ***Lactose*** |
| Sugar | 15 | ***High Sugar*** | ***Keyboard*** |
| Eggs | 5 | ***Contains animal products*** | ***Aquaphor*** |
| Vanilla Extract | 10 | ***N/A*** | ***Baking goods*** |
| Baking Soda | 2 | ***N/A*** | ***Candle*** |
| Water | 1 | ***Hope not*** | ***N/A*** |
| Vegetable Oil | 7 | ***Oil Product*** | ***Vegetables*** |
| Condensed Milk | 15 | ***Contains Dairy*** | ***Lactose*** |
| Coconut Milk | 9 | ***Dairy Alternative*** | ***Coconuts*** |
| Honey | 8 | ***High Sugar*** | ***Bees*** |
| Yeast | 5 | ***Yeast Intolerance*** | ***Bread*** |
| Cheese | 10 | ***Contains Dairy*** | ***Lactose*** |
| Baking Powder | 8 | ***Hope not*** | ***Baking*** |
| Salt | 9 | ***High Sodium*** | ***Sodium*** |
| Chocolate | 15 | ***Sugar*** | ***Dairy Product*** |
| Banana | 5 | ***Fruit*** | ***Potassium*** |
| Cream Cheese | 15 | ***Contains Dairy*** | ***Lactose*** |
| Raspberry | 5 | ***Fruit*** | ***Fruit Allergy*** |

**AUTHOR**

|  |  |  |
| --- | --- | --- |
| ***aID*** | ***aName*** | ***rID*** |
| ***123*** | ***ERosey*** | ***001*** |
| ***124*** | ***Martha Stewart*** | ***002*** |
| ***125*** | ***Guy Corvette*** | ***003*** |
| ***126*** | ***Gordon Ramsey*** | ***004*** |
| ***127*** | ***Rachel Ray*** | ***005*** |
| ***128*** | ***Steve Pike*** | ***006*** |

**RECIPE**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***rID*** | ***rName*** | ***Steps*** | ***prepTime*** | ***cookTime*** | ***Flavor*** | ***foodType*** |
| 001 | Banana Bread | 1. Preheat the oven to 350 degrees F (175 degrees C). Lightly grease a 9x5-inch loaf pan. / 2. Combine flour, baking soda, and salt in a large bowl. Beat brown sugar and butter with an electric mixer in a separate large bowl until smooth. Stir in eggs and mashed bananas until well blended. Stir banana mixture into flour mixture until just combined. Pour batter into the prepared loaf pan. / 3. Bake in the preheated oven until a toothpick inserted into the center comes out clean, about 60 minutes. Let bread cool in pan for 10 minutes, then turn out onto a wire rack to cool completely. | 00:15:00 | 01:00:00 | Sweet | Bread |
| 002 | Vanilla Cupcakes | 1. Preheat the oven to 350 degrees F. Line a 12-cup muffin pan with paper liners. Whisk the flour, baking powder and salt in a bowl. Beat the butter and sugar in a stand mixer fitted with the paddle attachment on medium-high speed until fluffy, about 4 minutes. Beat in the eggs, one at a time, scraping down the bowl as needed. Beat in the vanilla. Reduce the mixer speed to medium low; beat in half of the flour mixture, then all of the milk, then the remaining flour mixture until just combined. / 2. Divide the batter among the muffin cups, filling each three-quarters full. Bake until a toothpick inserted into the center of a cupcake comes out clean, 18 to 20 minutes, rotating the pan halfway through. Transfer the pan to a rack and let cool 5 minutes, then remove the cupcakes to the rack to cool completely. Top with Frosting. / 3. Whisk the egg whites, sugar and salt in a heatproof bowl set over a saucepan of simmering water (do not let the bowl touch the water) until the mixture is warm and the sugar dissolves. Remove the bowl from the pan; let cool slightly. / 4. Beat the egg white mixture in a stand mixer fitted with the whisk attachment (or with a hand mixer) on medium-high speed until stiff peaks form, 12 to 15 minutes. Beat in the butter a few pieces at a time, then continue beating until smooth. | 00:30:00 | 00:20:00 | Sweet | Cupcake |
| ***003*** | Cheesecake | 1. Position a rack in the middle of the oven and preheat to 350 degrees F. / 2. To make the crust: In a small bowl, mix the cracker crumbs with the melted butter and the sugar together until evenly moistened. Press the crumb mixture onto the bottom of a 9-inch springform pan. Bake the crust until golden brown, about 10 to 12 minutes. Cool the pan on a rack. / 3. Lower the oven temperature to 325 degrees F. In the bowl of a standing mixer fitted with the paddle attachment, or with a hand-held mixer, cream the cream cheese on medium speed until smooth. Gradually add the sugar and beat until light and fluffy. (Stop mixing and scrape down the sides of the bowl and beaters as needed.) Beat in the sour cream. Add the eggs, one at a time, beating well after each addition. Stir in the vanilla and cream. Pour the batter into the prepared pan. / 4. Bake until the top of the cheesecake is lightly browned, but the center still jiggles slightly, about 45 minutes. Cool the cake in the pan on a rack. Cover with plastic wrap and refrigerate overnight before serving. / 5. To remove the cake from the pan, run a knife or offset spatula around the edges to release the edges from the pan. Open the springform pan and remove the ring. / 6. Cut the cheesecake into wedges and serve with berries or a raspberry sauce if desired. | 00:20:00 | 01:00:00 | Sweet | Cake |
| ***004*** | Blueberry Muffins | 1. Preheat oven to 380 degrees F. / 2. In a large bowl sift together the flour, baking soda, baking powder, and salt and set aside. / 3. In another large bowl, whisk together the sugar, oil, egg and yogurt. Add the dry ingredients reserving 1 tablespoon of the dry ingredients and toss with the blueberries. Stir mixture for a count of 10. Add 1 cup blueberries to mixture and stir 3 more times. Reserve the 1/2 cup of blueberries. / 4. Using a #20 ice cream scoop, add the mixture to greased muffin pans. Sprinkle the remaining 1/2 cup of berries on top of muffins and press down lightly. Place into the oven and increase the temperature to 400 degrees. Bake for 20 to 25 minutes, rotating pan halfway through. Remove from oven and turn out, upside down on tea towel to cool completely. Serve immediately or store in airtight container for 2 to 3 days. | 00:25:00 | 00:25:00 | Sweet | Muffin |
| ***005*** | Lemon Bars | 1. Make the crust: Position a rack in the middle of the oven and preheat to 350 degrees F. Grease a 9-by-13-inch pan with vegetable oil and line with foil, leaving a 2-inch overhang on all sides; grease the foil with oil. Pulse the butter, flour, both sugars and the salt in a food processor until the dough comes together, about 1 minute. Press evenly into the bottom and about 1/2 inch up the sides of the prepared pan, making sure there are no cracks. Bake until the crust is golden, about 25 minutes. / 2. Meanwhile, make the filling: Whisk the whole eggs and yolks, sugar and flour in a bowl until smooth. Whisk in the lemon zest and juice. Remove the crust from the oven and reduce the temperature to 300 degrees F. Pour the filling over the warm crust and return to the oven. Bake until the filling is just set, 30 to 35 minutes. / 3. Let the bars cool in the pan on a rack, then refrigerate until firm, at least 2 hours. Lift out of the pan using the foil and slice. Dust with sugar before serving. | 00:15:00 | 01:00:00 | Tangy | Fruit |
| ***006*** | Mixed Fruit Tart | 1. For the crust: In a large bowl, beat together the butter and sugar with an electric mixer on medium-high speed until light and fluffy, about 3 minutes. Add the salt, egg and cream; beat until incorporated. Add the flour and beat until a dough comes together. Form the dough into a disc and then press it evenly into the bottom and up the sides of a 10-inch tart pan with a removable bottom; if necessary, use a piece of plastic wrap to help keep the dough from sticking. Refrigerate until firm, about 1 hour, or freeze for 30 minutes. / 2. Preheat the oven to 350 degrees F. Line the tart crust with foil and fill with pie weights. Bake until the edges of the crust look set and just barely golden, about 15 minutes. Carefully remove the foil and pie weights, and continue to bake until the crust is golden brown all over, about 20 minutes more. Cool completely. / 3. For the filling: In a large bowl, combine the cream cheese, sugar and vanilla, and beat with an electric mixer until soft and very creamy, 1 to 2 minutes. Add the cream and continue beating until the mixture holds stiff peaks, stopping occasionally to scrape the bowl with a rubber spatula, 2 to 3 minutes more. / 4. Spoon the cream cheese mixture into the cooled tart shell and smooth with an offset spatula. Top with the berries. / 5. Combine the apricot preserves and a splash of water in a small bowl and microwave until warm, about 45 seconds. Strain through a sieve into another bowl. Gently brush or spoon the apricot glaze over the berries. | 00:40:00 | 01:15:00 | Tart | Fruit |

**TOOL**

|  |  |  |
| --- | --- | --- |
| ***tName*** | ***tType*** | ***Description*** |
| Measuring cups | Utensil | Measuring cups with following sizes: 1/4 cup, 1/3 cup, 1/2 cup, 1 cup |
| ***Spoon*** | Utensil | Used to stir things |
| ***Spatula*** | Utensil | Used to flip things |
| ***Whisk*** | Utensil | Used to mix things' |
| ***Rolling Pin*** | Utensil | Used to roll crust and other food to be flat' |
| ***Knife*** | Utensil | Used to cut things' |
| ***Cake Pan*** | Pan | Put cakes in this to bake' |
| ***Baking Sheet*** | Pan | Put food on this and bake' |
| ***Hand Mixer*** | Utensil | Makes mixing ingredients easier |
| ***Pie Plate*** | Pan | Put pies on this to bake |
| ***Tart Pan*** | Pan | Used to hold tarts |

**LISTED**

|  |  |
| --- | --- |
| ***IName*** | ***rID*** |
| Banana | 001 |
| Flour | 001 |
| Sugar | 001 |
| Sugar | 002 |
| Vanilla Extract | 002 |
| Water | 002 |
| Cream Cheese | 003 |
| Eggs | 003 |
| Sugar | 003 |
| Baking Soda | 004 |
| Baking Powder | 004 |
| Salt | 004 |
| Flour | 005 |
| Eggs | 005 |
| Sugar | 005 |
| Water | 006 |
| Sugar | 006 |
| Flour | 006 |

**REVIEWER**

|  |  |
| --- | --- |
| ***revID*** | ***revName*** |
| 010 | John Doe |
| 020 | Morgan Freeman |
| 030 | Guy Fieri |
| 040 | Beyonce |
| 050 | Betty White |
| 060 | George Washington |

**REVIEWED**

|  |  |  |
| --- | --- | --- |
| ***Date*** | ***rID*** | ***revID*** |
| 2020-01-01 | 001 | 010 |
| 2020-04-03 | 002 | 060 |
| 2021-05-14 | 003 | 040 |
| 2022-08-04 | 004 | 030 |
| 2022-09-04 | 005 | 020 |
| 2019-07-11 | 006 | 050 |

**METHOD**

|  |  |
| --- | --- |
| ***mName*** | ***Description*** |
| Stir | Grab a spoon and move it in a circular motion to mix ingredients together |
| Measure | Grab a measuring cup of the preferred size and pour in ingredients |
| Flip | Grab a spatula, shove it under whatever you want to flip and turn it to the opposite side |
| Mix | Grab a hand mixer, put the metal looking part into a bowl of ingredients, and turn it on to mix the ingredients |
| Whisking | Grab a whisk, and move in a very quick circular motion to mix ingredients |
| Roll | Grab a rolling pin, put it on the crust or the food that you want to be flat, and move it back and forth |
| Cut | Grab a knife, make sure the sharp part is facing the particular thing you want to cut, and move it down vertically to cut |
| Placing | Put pies on pie plate to bake pies |
| Food Baking | Put food on baking sheet to bake food |
| Cake Baking | Put cakes into cake pan to bake cakes |
| Hold Tarts | Put tarts into tart pan to hold tarts |

**USE TOOL**

|  |  |
| --- | --- |
| ***tName*** | ***mName*** |
| Spoon | Stir |
| Measuring cups | Measure |
| Spatula | Flip |
| Hand Mixer | Mix |
| Whisk | Whisking |
| Rolling Pin | Roll |
| Knife | Cut |
| Pie Plate | Placing |
| Baking Sheet | Food baking |
| Cake Pan | Cake baking |
| Tart Pan | Hold tarts |

***Requirement 6 & 7:***

***6.*** SELECT iName FROM LISTED WHERE rID = '003'

***7.***  INSERT INTO INGREDIENTS VALUES ('rose', 0, 'scented', 'flower'), ('strawberry', 20, 'N/A', 'N/A');