SQL Syntax

Housekeeping

- Don’t forget to sign in!

Whole Database Commands

```
CREATE {DATABASE | SCHEMA} [IF NOT
EXISTS] db_name

ALTER {DATABASE | SCHEMA} [db_name]
alter_specification …

DROP {DATABASE | SCHEMA} [IF EXISTS]
db_name
```

Table Commands

CREATE [TEMPORARY] TABLE [IF NOT EXISTS] tbl_name

ALTER [ONLINE | OFFLINE] [IGNORE] TABLE tbl_name

DROP [TEMPORARY] TABLE [IF EXISTS] tbl_name

TRUNCATE [TABLE] tbl_name

CREATE Examples

```
CREATE TABLE t1 (a INTEGER,b CHAR(10));
```

ALTER TABLE Examples

```
ALTER TABLE t1 RENAME t2;

ALTER TABLE t2 ADD d TIMESTAMP;

ALTER TABLE t2 ADD INDEX (d), ADD
UNIQUE (a);
```

DROP and TRUNCATE

DROP [TEMPORARY] TABLE [IF EXISTS]
tbl_name

TRUNCATE [TABLE] tbl_name

(both require DROP Privileges)

SELECT (the basics)

SELECT

FROM

WHERE

ORDER BY

SELECT (MySQL)

```
SELECT
    [ALL | DISTINCT | DISTINCTROW ]
      [HIGH_PRIORITY]
      [STRAIGHT_JOIN]
      [SQL_SMALL_RESULT] [SQL_BIG_RESULT] [SQL_BUFFER_RESULT]
      [SQL_CACHE | SQL_NO_CACHE] [SQL_CALC_FOUND_ROWS]
    select_expr [, select_expr ...]
[FROM table_references
[WHERE where_condition]
[GROUP BY {col_name | expr | position}
  [ASC | DESC], ... [WITH ROLLUP]]
[HAVING where_condition]
[ORDER BY {col_name | expr | position}
  [ASC | DESC], ...]
[LIMIT {[offset,] row_count | row_count OFFSET offset}]
[PROCEDURE procedure_name(argument_list)]
[INTO OUTFILE 'file_name' export_options
  | INTO DUMPFILE 'file_name'
  | INTO var_name [, var_name]]
[FOR UPDATE | LOCK IN SHARE MODE]]
```

SELECT Examples

```
SELECT 1;

SELECT * FROM wp_users;
```

```
SELECT user_login, user_email FROM wp_users;

SELECT *
FROM wp_users wp JOIN wp_79_posts wpp
ON wp.ID = wpp.post_author
WHERE wpp.post_status='publish'
ORDER BY wpp.post_date;
```

BEING A

WEB DESIGNER

IS EASY. IT'S LIKE

RIDING A BIKE

EXCEPT THE BIKE IS ON FIRE

YOU'RE ON FIRE

EVERYTHING IS ON FIRE

AND YOU'RE IN HELL

Create Movies

```
CREATE TABLE `movies` (
  `ID` int(11) NOT NULL AUTO_INCREMENT,
  `MovieName` varchar(45) DEFAULT NULL,
  `Rating` double DEFAULT NULL,
  `DateAdded` timestamp NULL DEFAULT CURRENT_TIMESTAMP,
  PRIMARY KEY (`ID`)
) ENGINE=InnoDB AUTO_INCREMENT=2 DEFAULT CHARSET=latin1;
```

CREATE Ratings

```
CREATE TABLE `Rating` (
  `ID` int(11) NOT NULL AUTO_INCREMENT,
  `Rating` int(11) DEFAULT NULL,
  `MovieID` int(11) DEFAULT NULL,
  PRIMARY KEY (`ID`),
  KEY `fk_Rating_Movie_idx` (`MovieID`),
  CONSTRAINT `fk_Rating_Movie` FOREIGN KEY (`MovieID`) REFERENCES
  `movies` (`ID`) ON DELETE NO ACTION ON UPDATE NO ACTION
) ENGINE=InnoDB AUTO_INCREMENT=1000001 DEFAULT CHARSET=latin1;
```

INSERT Statements

- INSERT INTO *table* (*field1*, *field2*)
- VALUES (*value1*, *value2*);

INSERT statements

- INSERT INTO movies (MovieName, Rating)
  VALUES (‘Star Wars’, 8.0);

UPDATE statements

- UPDATE *table*
- SET *field = value*
- WHERE *condition;*

UPDATE examples

- UPDATE movies
  SET rating = 2
  WHERE ID = 1;

- UPDATE movies
  SET MovieName = ‘Star Wars IV: A New Hope’
  WHERE MovieName = ‘Star Wars’;

DELETE Statements

```
DELETE FROM table

WHERE condition;
```

DELETE Examples

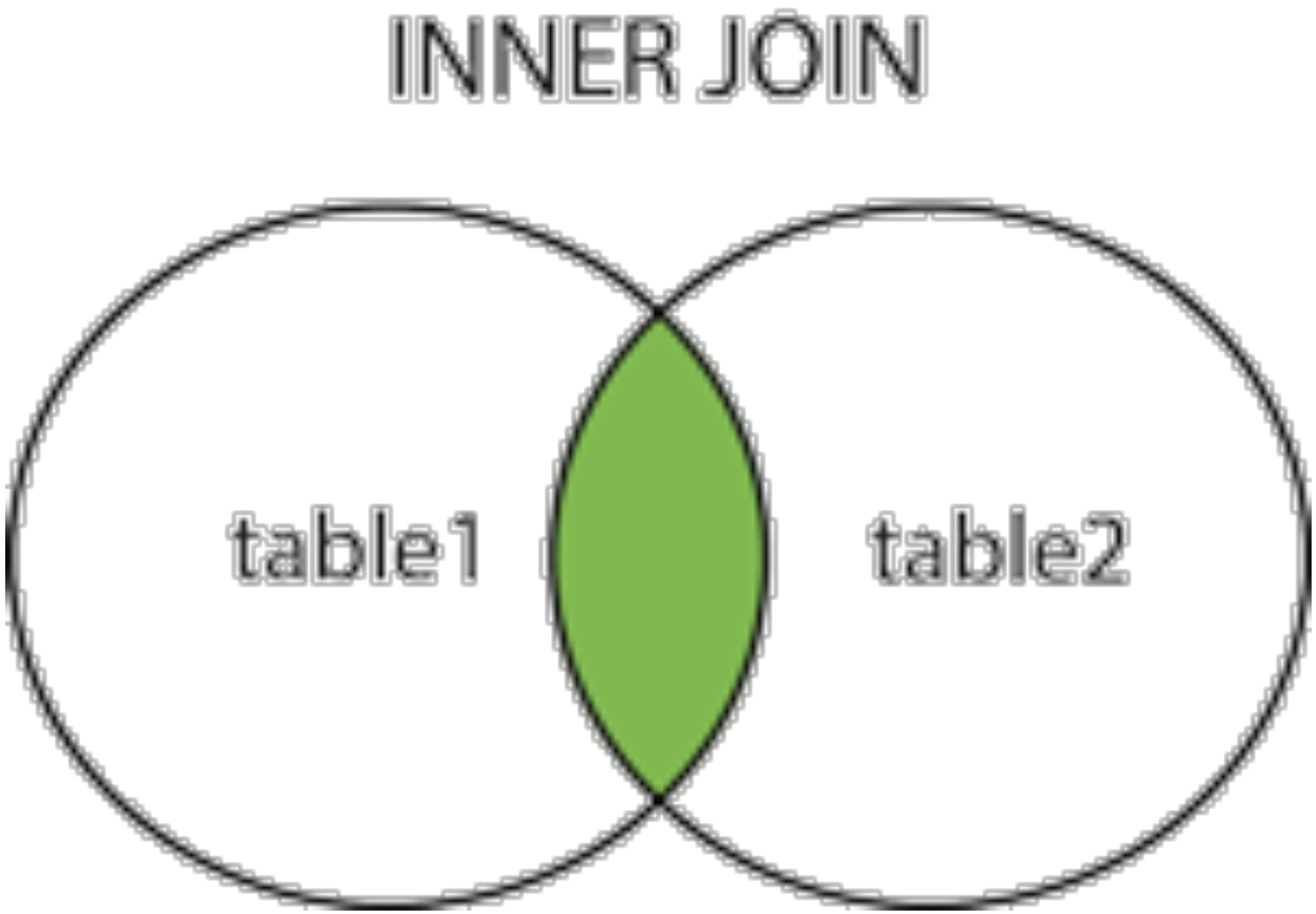
```
-- Don’t do this, deletes everything!

DELETE FROM Movies;
```

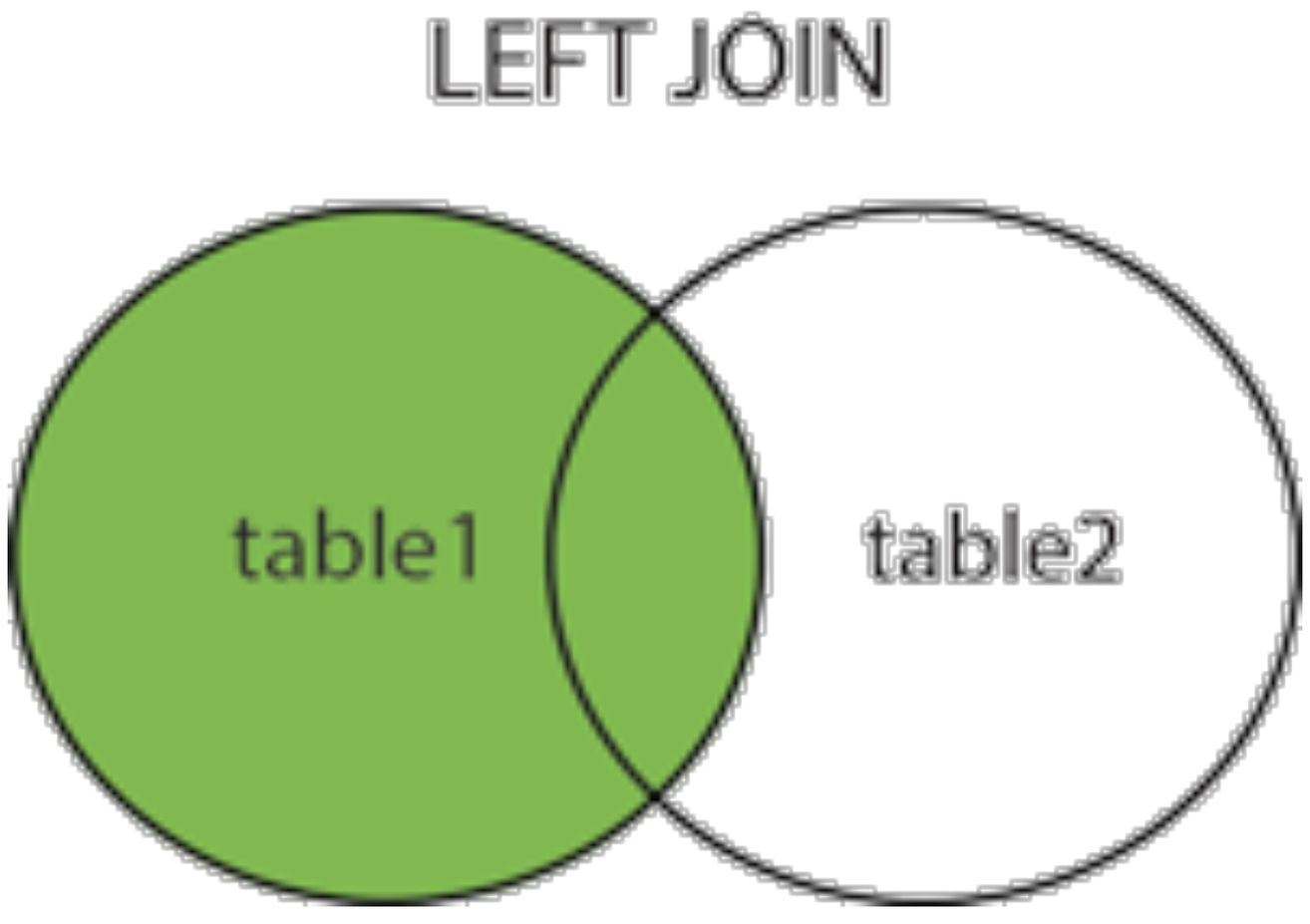
```
DELETE FROM Movies

WHERE MovieName LIKE ‘%Matrix%’;
```

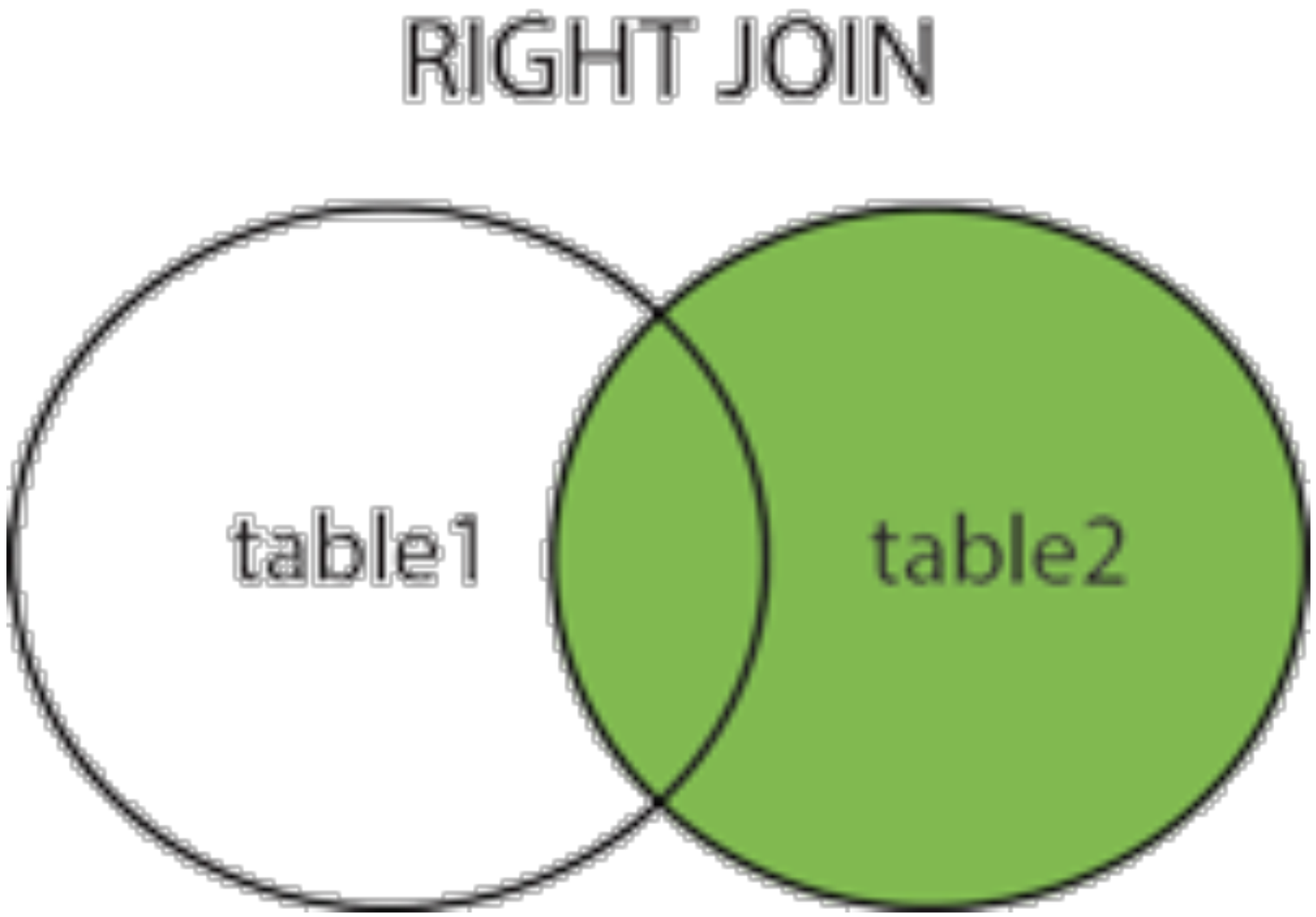
INNER JOIN



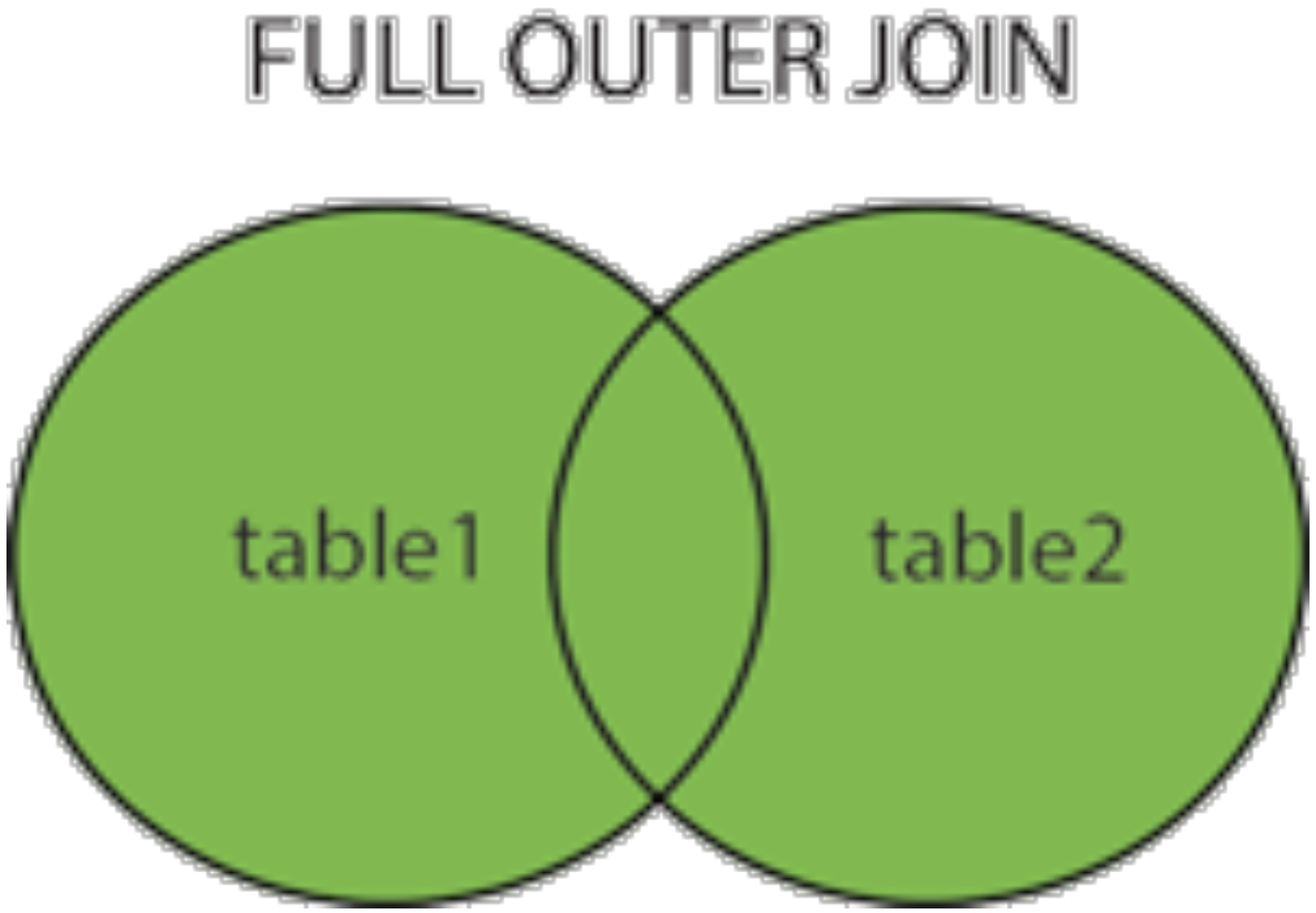
LEFT JOIN



RIGHT JOIN



FULL OUTER JOIN



INNER JOIN

```
select * from Beer JOIN Batches ON
Beer.ID = Batches.Beer;
```

INNER JOIN

```
SELECT * FROM Beer be JOIN
BeerIngredients bi ON be.ID =
bi.BeerJOIN
Ingredients i ON bi.Ingredient =
i.ID;
```

LEFT JOIN

```
SELECT * FROM Beer be JOIN
BeerIngredients bi ON be.ID =
bi.BeerJOIN
Ingredients i ON bi.Ingredient =
i.ID;
```

FULL-ish OUTER-ish

```
SELECT
      *
FROM
      Beer be
          LEFT OUTER JOIN
      BeerIngredients bi ON be.ID = bi.Beer
          RIGHT OUTER JOIN
      Ingredients i ON bi.Ingredient = i.ID;

--Try replacing the RIGHT with LEFT
```

UNION

```
SELECT Name FROM Beer
UNION
SELECT Name FROM Ingredients;
```

Stored Procedure

```
DELIMITER //

CREATE PROCEDURE `add_ingredient` (type int, cost int, name
varchar(45), current_inventory int, out id int)

BEGIN
    INSERT INTO Ingredients (Type, Cost, Name,
CurrentInventory_Cups) VALUES (type, cost, name,
current_inventory);

    SELECT LAST_INSERT_ID() INTO id;

END //
```

Calling Stored Procedures

```
CALL `add_ingredient` (2, 4, 'new ingredient', 20,
@outgoingid);
select @outgoingid;
```

FUNCTIONS

```
DELIMITER //

CREATE FUNCTION `add_ingredient_function` (type int, cost int, name varchar(45),
current_inventory int)

RETURNS INT

BEGIN

    INSERT INTO Ingredients (Type, Cost, Name, CurrentInventory_Cups) VALUES (type,
cost, name, current_inventory);

    RETURN LAST_INSERT_ID();

END //
```

Calling Functions

```
SELECT `add_ingredient_function` (2, 4, 'new
ingredient', 20);
```

TRIGGERS

```
DELIMITER |

CREATE TRIGGER trig_average AFTER INSERT ON Rating

FOR EACH ROW

BEGIN

UPDATE movies SET Rating=(SELECT AVG(Rating) FROM Rating
WHERE MovieID = NEW.MovieID) WHERE ID=NEW.MovieID;

END;

|

INSERT INTO Rating (Rating, MovieID) VALUES (100, 2);
```