Waiting for
Our Logo

# PHP STUDENT JAKTIM #2

## Database Fundamental and How to Implement Using PHP

# INTRODUCTION

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# DATABASE

- A collection of related data and data is a collection of facts and figures that can be processed to produce information.

SQLite

ORACLE®

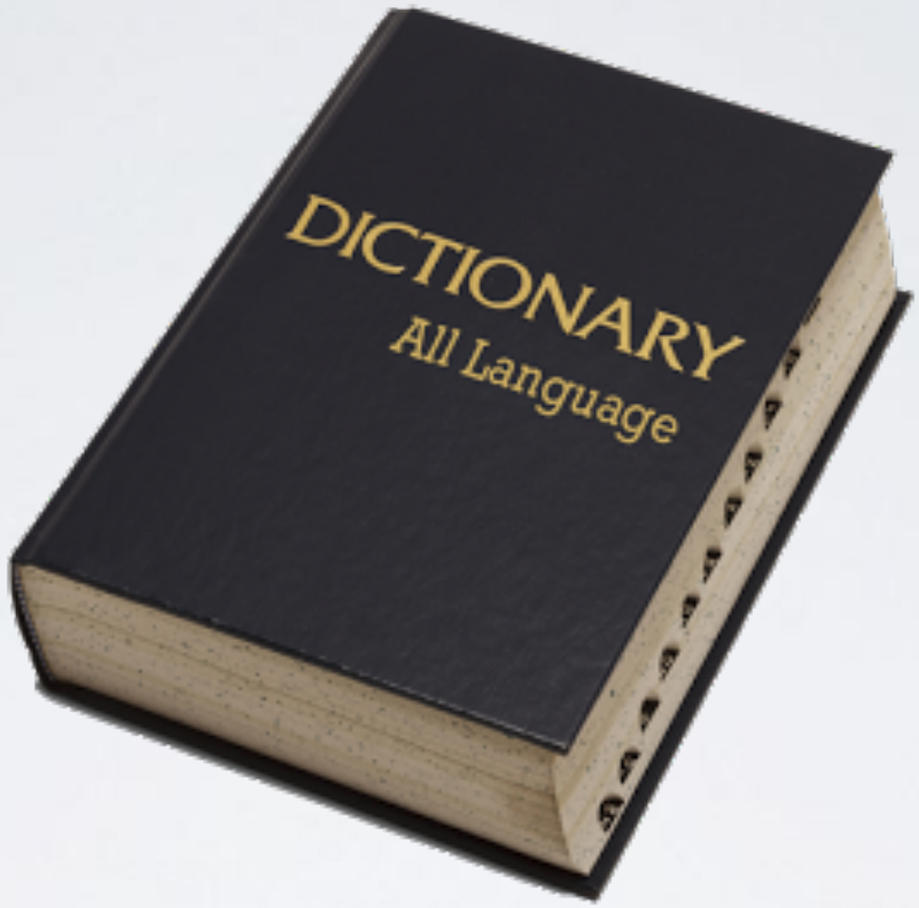
DATABASE

MariaDB®

mongoDB.

PostgreSQL

MySQL®




# DICTIONARY #1

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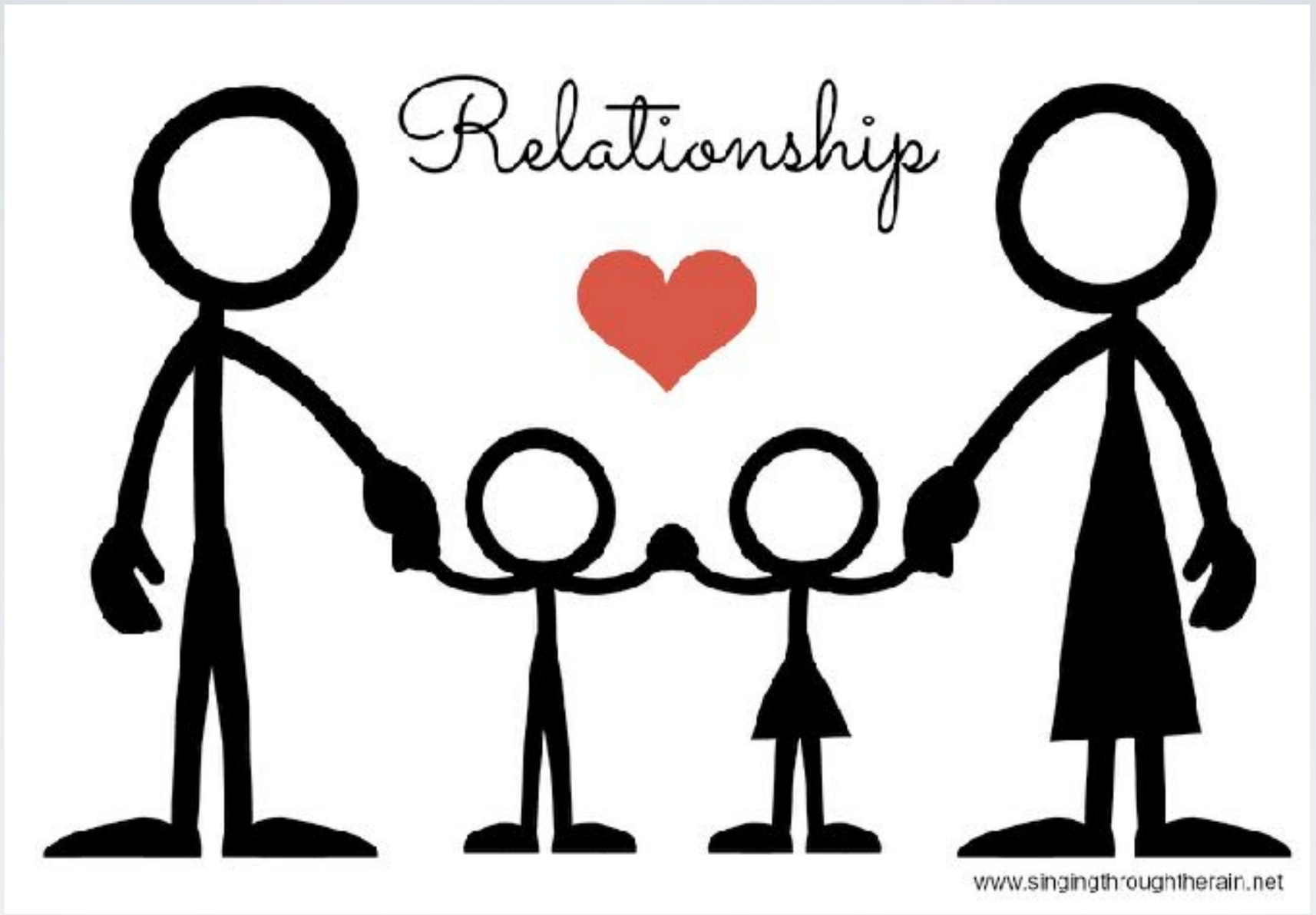
# DICTIONARY # I

- Primary Key : consists of one or more columns whose data contained within is used to uniquely identify each row in the table.

- Foreign Key : a set of one or more columns in a table that refers to the primary key in another table.

- Composite Key : a combination of two or more columns in a table that can be used to uniquely identify each row in the table.




# RELATIONSHIP

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# HOW DATA IS USUALLY PRESENT

| ID | USERNAME | PASSWORD | NAME | ADDRESS |
|---|---|---|---|---|
| 1 | firstblood | kmzway87aa | Taka | Tokyo |
| 2 | midblood | hesoyam77 | John | Sydney |
| 3 | lastblood | kirikananatasbawah | Rendi | Jakarta |

# PRESENT DATA WITH DATABASE

TABLE USER

| ID | USERNAME | PASSWORD |
|---|---|---|
| 1 | firstblood | kmzway87aa |
| 2 | midblood | hesoyam77 |
| 3 | lastblood | kirikananatasbawah |

TABLE USER_DETAIL

| USERNAME | NAME | ADDRESS |
|---|---|---|
| firstblood | Taka | Tokyo |
| midblood | John | Sydney |
| lastblood | Rendi | Jakarta |

This is One To One Relationship

- Which is one data can only have one data in other table
- Only need two tables consist of A table and B table
- Used for separate complex data with a lot of attributes (User Detail have Name, Nickname, Address, Birthday, Job, etc)

# HOW DATA IS USUALLY PRESENT

| ID | NAME | PHONE NUMBER |
|---|---|---|
| 1 | Heru | 1234-56789 |
| | | 9876-54321 |
| | | 2345-16789 |
| 2 | Sinta | 0809-89999 |
| 3 | Ilham | 4444-33333 |
| | | 2233-33344 |

# PRESENT DATA WITH DATABASE

| TABLE USER | | | TABLE PHONE_NUMBER | |
|---|---|---|---|---|
| **ID** | **NAME** | | **HUMAN_ID** | **PHONE_NUMBER** |
| 1 | Heru | | 1 | 1234-56789 |
| 2 | Sinta | | 1 | 9876-54321 |
| 3 | Ilham | | 1 | 2345-16789 |
| | | | 2 | 0809-89999 |
| | | | 3 | 4444-33333 |
| | | | 3 | 2233-33344 |

This is One To Many Relationship

- Which is one data can have a lot of other but not otherwise
- Only need two tables consist of A table and B table

# HOW DATA IS USUALLY PRESENT

| NAME | ADDRESS | BOOK_TITLE | BOOK_AUTHOR | DATE |
|---|---|---|---|---|
| Bruno | Washington | PHP Programming | Jessie P. | 2017-03-10 |
| Bruno | Washington | MySQL Database | Gerrard D. Santiago | 2016-10-10 |
| Andria | Paris | MySQL Database | Gerrard D. Santiago | 2016-10-09 |
| Sisca | Sydney | React Native Basic | Tyrell Wellick | 2017-02-28 |
| Andria | Paris | PHP Programming | Jessie P. | 2017-01-15 |
| Andria | Paris | React Native Basic | Tyrell Wellick | 2017-02-16 |

# PRESENT DATA WITH DATABASE

TABLE USER

| ID | NAME | ADDRESS |
|---|---|---|
| 1 | Bruno | Washington |
| 2 | Andria | Paris |
| 3 | Sisca | Sydney |

TABLE BOOK

| ID | TITLE | AUTHOR |
|---|---|---|
| 1 | PHP Programming | Jessie P. |
| 2 | MySQL Database | Gerrard D. Santiago |
| 3 | React Native Basic | Tyrell Wellick |

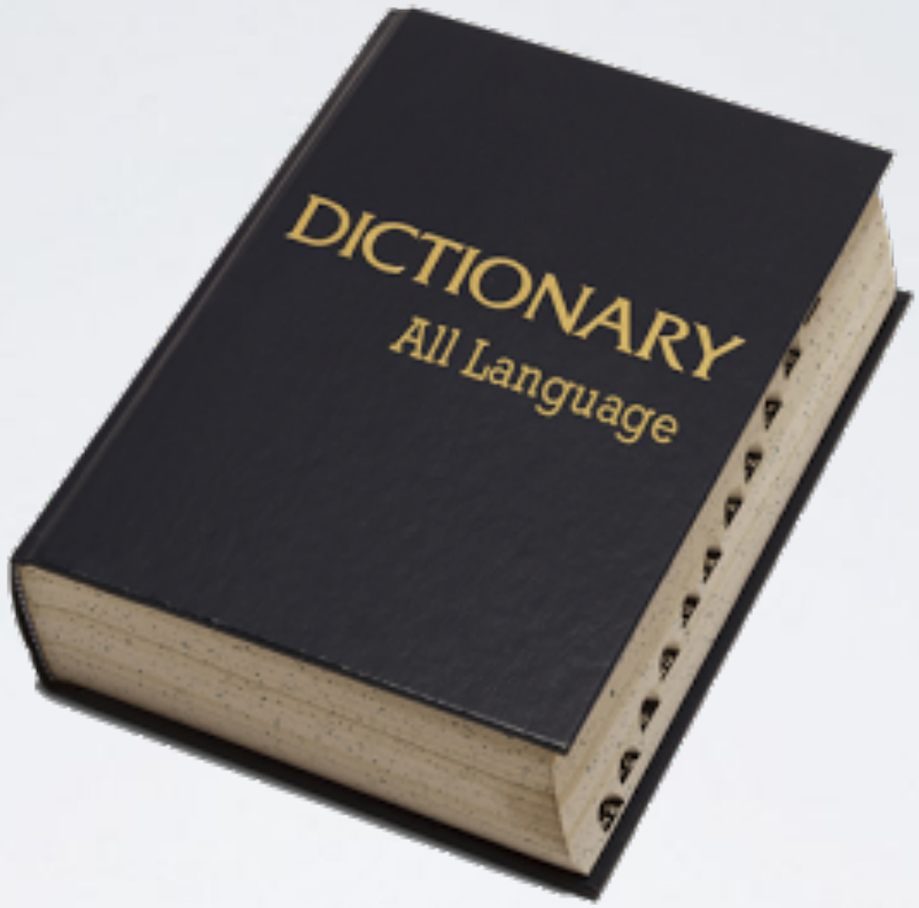
TABLE USER_BOOK

| USER_ID | BOOK_ID | DATE |
|---|---|---|
| 1 | 1 | 2017-03-10 |
| 1 | 2 | 2016-10-10 |
| 2 | 2 | 2016-10-09 |
| 3 | 3 | 2017-02-28 |
| 1 | 1 | 2017-01-15 |
| 1 | 3 | 2017-02-16 |

# MANY TO MANY

This is Many To Many Relationship

- Which is one data can have a lot of other and otherwise
- Only need three tables consist of A table, B table, and Relation table




# DICTIONARY #2

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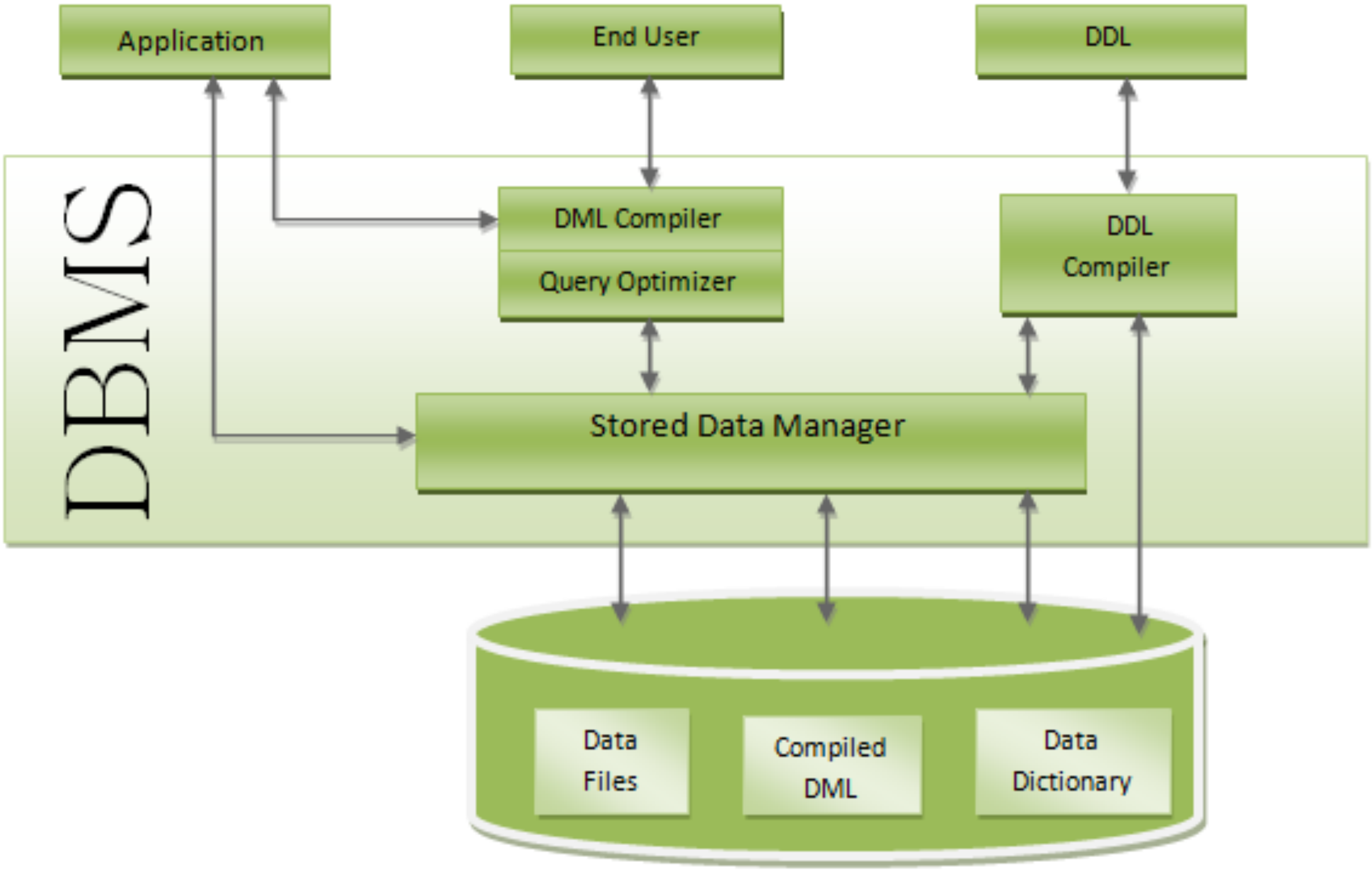
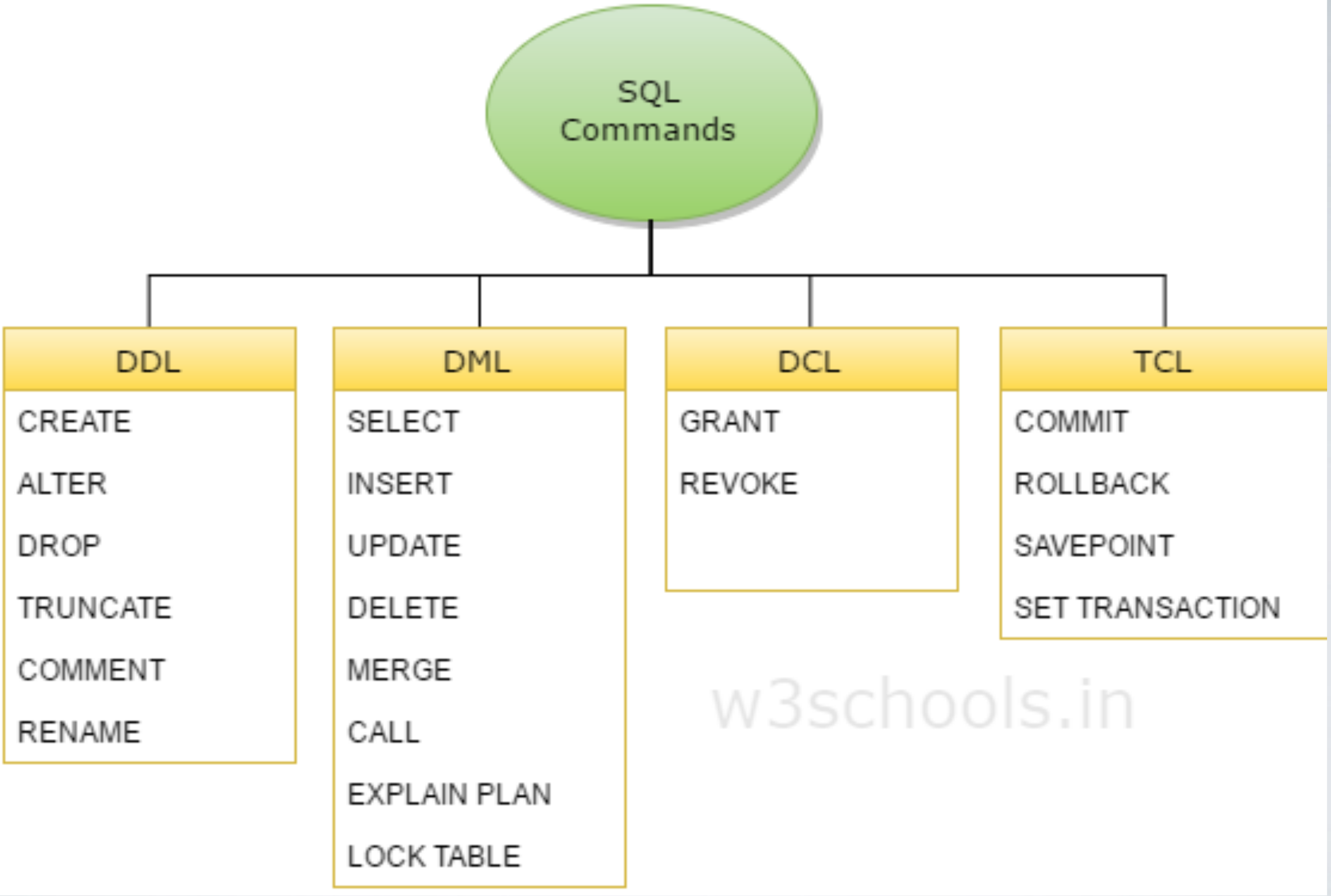
# DICTIONARY #2

- Applications: - It can be considered as a user friendly web page where the user enters the requests.
- End User: - They are the real users of the database. They can be developers, designers, administrator or the actual users of the database.
- DDL: - Data Definition Language (DDL) is a query fired to create database, schema, tables, mappings etc in the database. These are the commands used to create the objects like tables, indexes in the database for the first time. In other words, they create structure of the database.
- DML: - Data Manipulation Language is a query to insert, update, delete, and retrieves data from database with its condition.
- Storage: - The place that data stored after DDL and DML are executed.




source: https://www.tutorialcup.com/dbms/structure-of-dbms.htm




source: http://www.w3schools.in/wp-content/uploads/2014/08/SQL-Commands.png


# DATA DEFINITION LANGUAGE

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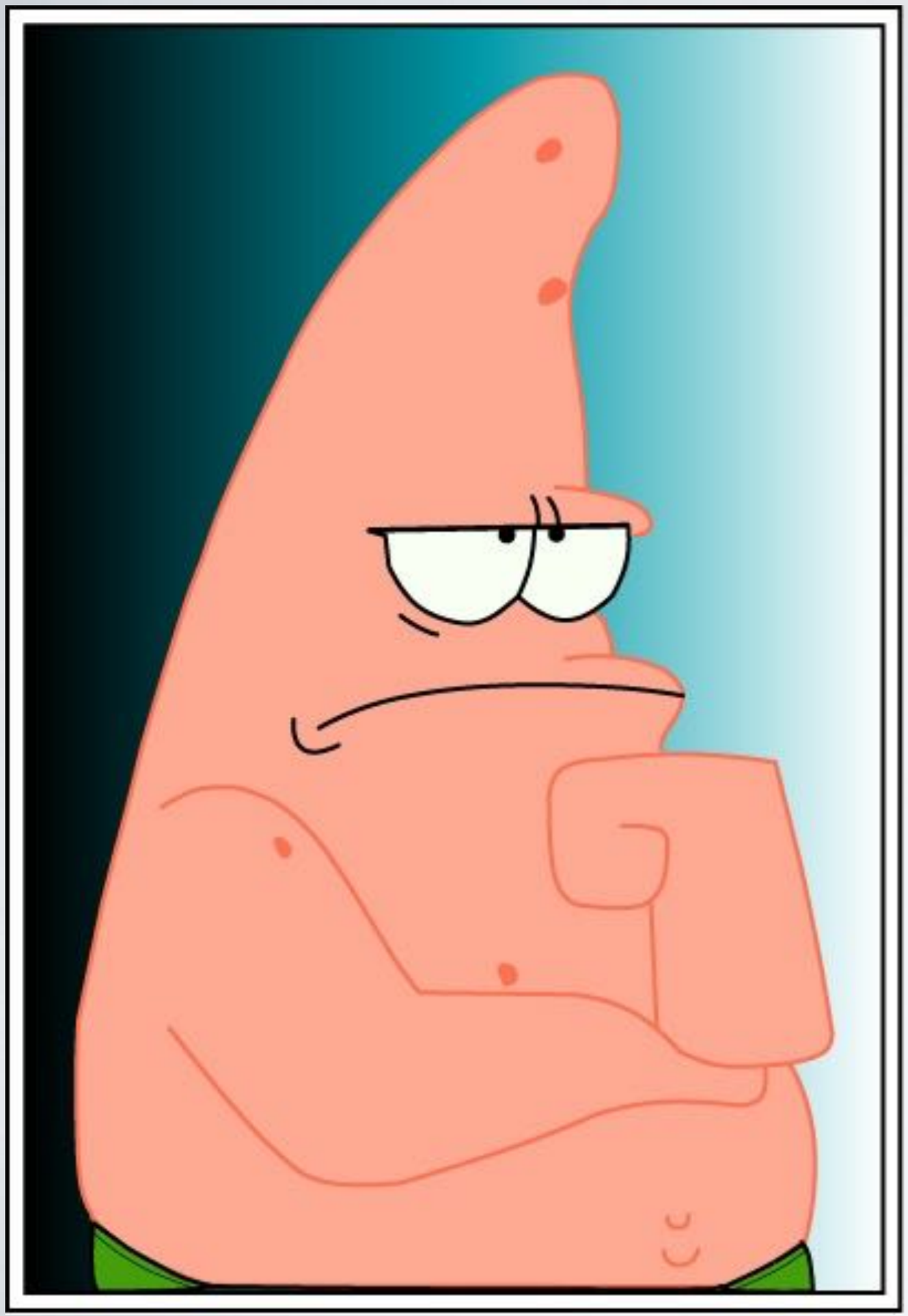
| CREATE | ALTER | DROP |
| --- | --- | --- |
| • CREATE DATABASE | • ALTER DATABASE | • DROP DATABASE |
| • CREATE FUNCTION | • ALTER FUNCTION | • DROP FUNCTION |
| • CREATE INDEX | • ALTER PROCEDURE | • DROP INDEX |
| • CREATE PROCEDURE | • ALTER TABLE | • DROP PROCEDURE |
| • CREATE TABLE | • ALTER VIEW | • DROP TABLE |
| • CREATE TRIGGER | • RENAME TABLE | • DROP TRIGGER |
| • CREATE VIEW | | • DROP VIEW |



Are you getting confused?


It’s as pretty cute as me

# CREATE

- CREATE DATABASE database_name;
- USE database_name;
- CREATE TABLE table_name (

```
    id INT NOT NULL AUTO_INCREMENT PRIMARY KEY,
    name VARCHAR(25) NOT NULL,
    age INT NOT NULL
);
```

# ALTER

- ALTER TABLE old_table RENAME TO new_table;
- ALTER TABLE table_name MODIFY column CHAR(10) NULL;
- ALTER TABLE table_name CHANGE old_column new_column VARCHAR(100);

# DROP

- DROP DATABASE DatabaseName;
- DROP TABLE table_name;


# DATA MANIPULATION LANGUAGE

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INSERT

UPDATE

DELETE

SELECT

# INSERT

- INSERT INTO CUSTOMERS (ID,NAME,AGE)

  VALUES (6, 'Komal', 22);

- INSERT INTO CUSTOMERS

  VALUES (7, 'Muffy', 24, 'Indore', 10000.00 );

# UPDATE

- UPDATE table_name SET column1 = value1, column2 = value2...., columnN = valueN WHERE [condition];

- UPDATE customer SET name='John' WHERE id='1';

# DELETE

- DELETE FROM customer WHERE id=‘2’
- DELETE FROM customer WHERE 1;
- TRUNCATE TABLE customer;

This query actually included of DDL statement.

# SELECT / RETRIEVES DATA

- SELECT * FROM customer;
- SELECT id, name, age FROM customer;
- SELECT * FROM customer WHERE id=‘1’;
- SELECT * FROM customer WHERE age>20 AND age<30;

# ‘LIKE’ CONDITION

- SELECT name FROM customer WHERE name LIKE ‘%nisa%’;  // contains nisa

- SELECT name FROM customer WHERE name LIKE ‘%nisa’;  // suffix nisa

- SELECT name FROM customer WHERE name LIKE ‘nisa%’;  // prefix nisa


Am i right?


# SQL WITH PHP

check this repo:
http://github.com/insanrizky/php-mysql-fundamental

“Push yourself!
Cause no one else is going to do it for you.”

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See you next meet up!

- PHP Student Jaktim #2 -