

DATABASE 사용자 추가 & 삭제 & 권한변경/ 사용자용 DATABASE 사용자 추가 & 삭제

- APT 패키지 툴
 - 기본 명령어 : apt-get[option][command][package name]
 - 최신버전 읽어오기 : apt-get update
 - 패키지 설치 & 재설치 : apt-get install [패키지명] & apt-get reinstall [패키지명]
 - 패키지 업그레이드 : apt-get upgrade [패키지명]
 - 패키지 제거 : apt-get remove [패키지명]
 - 패키지 검색 : apt-cache search [검색어]

- DB Engine 설치 및 테스트

1. Super user로 세팅

- root 로 변경

```
pi@Kminpi:~ $ sudo su -  
  
SSH is enabled and the default password for the 'pi' user has not been changed.  
This is a security risk - please login as the 'pi' user and type 'passwd' to set  
a new password.  
  
root@Kminpi:~#
```

- Mysql다운

```
root@Kminpi:~# apt install php-mysql  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
The following additional packages will be installed:  
  php7.3-mysql  
The following NEW packages will be installed:  
  php-mysql php7.3-mysql  
0 upgraded, 2 newly installed, 0 to remove and 197 not upgraded.  
Need to get 102 kB of archives.  
After this operation, 368 kB of additional disk space will be used.  
Do you want to continue? [Y/n] Y  
Get:1 http://ftp.kaist.ac.kr/raspbian/raspbian buster/main armhf php7.3-mysql ar  
mhf 7.3.14-1~deb10u1 [96.4 kB]  
Get:2 http://ftp.kaist.ac.kr/raspbian/raspbian buster/main armhf php-mysql all 2  
:7.3+69 [5,992 B]  
Fetched 102 kB in 2s (56.1 kB/s)  
Selecting previously unselected package php7.3-mysql.  
(Reading database... 154452 files and directories currently installed.)
```

- MariaDB설치(apt-get -y install mariadb-server/ -y 옵션은 다운하면서 나오는 모든 질문에 yes하겠다는 뜻이다)

```
root@Kminpi:~# apt-get -y install mariadb-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  galera-3 gawk libaio1 libcgi-fast-perl libcgi-pm-perl
  libconfig-inifiles-perl libdbd-mysql-perl libdbi-perl libencode-locale-perl
  libfcgi-perl libhtml-parser-perl libhtml-tagset-perl libhtml-template-perl
  libhttp-date-perl libhttp-message-perl libio-html-perl
  liblwp-mediatypes-perl libmariadb3 libreadline5 libsigsegv2
  libterm-readkey-perl libtimedate-perl liburi-perl mariadb-client-10.3
  mariadb-client-core-10.3 mariadb-common mariadb-server-10.3
  mariadb-server-core-10.3 mysql-common socat
Suggested packages:
```

- 기본 설정 파일수정

- `root@Kminpi:~# vi /etc/mysql/mariadb.conf.d/50-server.cnf`
server파일

```
104 #character-set-server = utf8mb4
105 #collation-server      = utf8mb4_general_ci
106 init_connect=SET collation_connection = utf8_general_ci
107 init_connect=SET NAMES utf8
108 character-set-server=utf8
109 collation-server=utf8_general_ci
110 lower_case_table_names = 1
```

위 두줄을 comment처리하고 밑의 네줄을 추가한다.

```
root@Kminpi:~# vi /etc/mysql/mariadb.conf.d/50-client.cnf
```

client파일

```
7 # Default is Latin1, if you need UTF-8 set this (also in server section)
8 #default-character-set = utf8mb4
9 default-character-set = utf8
```

default하나를 comment처리하고 밑의 한줄을 추가한다.

- 서버 재시작

```
root@Kminpi:~# service mysql restart
```

- mysql 접속하기 (mysql -u root -p) - 비밀번호 = '1234'

```
root@Kminpi:~# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 36
Server version: 10.3.22-MariaDB-0+deb10u1 Raspbian 10

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]>
```

- root비밀번호 생성

```
MariaDB [(none)]> update mysql.user set authentication_string=password('1234')where user='root';
Query OK, 1 row affected (0.008 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

root의 비밀번호 = 1234

- 특정 사용자를 위한 DB 만들기

- 사용자용 DB 생성(사용자용 DB, DB접근 사용자 명, 비밀번호)

```
MariaDB [(none)]> create database userdb;
Query OK, 1 row affected (0.001 sec)

MariaDB [(none)]> grant all privileges on userdb.* to 'db_kmin'@'localhost' identified by '1234';
Query OK, 0 rows affected (0.002 sec)

MariaDB [(none)]> flush privileges;
Query OK, 0 rows affected (0.002 sec)
```

사용자용 DB를 생성하여 db_kmin이라는 사용자 명과 비밀번호 1234로 설정하였다.(DB이름 : userdb)
quit & exit을 통하여 나간다.

```
MariaDB [(none)]> quit
Bye
root@Kminpi:~#
```

```
root@Kminpi:~# exit
logout
pi@Kminpi:~$
```

2. 사용자가 세팅

- mariaDB들어가기

```
pi@Kminpi:~$ mysql -u db_kmin -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 38
Server version: 10.3.22-MariaDB-0+deb10u1 Raspbian 10

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]>
```

- Data base 사용가능한지 확인

```
MariaDB [(none)]> use userdb;
Database changed
```

- 다른 Data base를 만들 수 있을까 확인

```
MariaDB [userdb]> use mysql;
ERROR 1044 (42000): Access denied for user 'db_kmin'@'localhost' to database 'mysql'
MariaDB [userdb]>
```

root가 아니라 거절당한다.

```
MariaDB [userdb]> quit
Bye
```

나가기

- DB Engine 설치 & 테스트

먼저, 서버 관리자에게 웹서비스 세팅 확인 요청을 한다.(사용자의 가상호스트 웹사이트에서 php 구동이 가능한지) -여기서는 잠시 서버 관리자의 역할

```
server {
    listen 80;
    listen [::]:80;

    server_name kmin.com;

    root /home/kmin/html;
    index index.html;
    location ~ \.php$ {
        include snippets/fastcgi-php.conf;
        fastcgi_pass unix:/var/run/php/php7.3-fpm.sock;
        fastcgi_param SCRIPT_FILENAME $document_root$fastcgi_script_name;
        include fastcgi_params;
    }
}
```

- nginx Restart-서버 관리자 역할 끝

```
root@Kminpi:~# service nginx restart
```

- php와 mysql을 사용하는 웹사이트 소스 제작(만들어져 있는 소스 clone하기)
 - fork & clone

The screenshot shows a GitHub repository page for 'Kim-Min-Hyeok / Chat-Room'. The repository is forked from 'kkim-hgu/Chat-Room'. It has 6 commits, 1 branch, 0 packages, 0 releases, and 2 contributors. The repository description is 'A simple chat application using PHP OOP and AJAX'. The file list includes 'audio', 'css', 'database', 'images', and 'README.md'. The 'audio' folder was added via upload 2 years ago. The 'css' folder was added via upload 2 years ago. The 'database' folder was added via upload 3 days ago. The 'images' folder was added via upload 2 years ago. The 'README.md' file was updated 2 years ago.

먼저 clone을 하기 위하여 내 깃허브에 소스를 Fork한다.


```
kmin@Kminpi:~ $ cd html
kmin@Kminpi:~/html $ git clone https://github.com/Kim-Min-Hyeok/Chat-Room
Cloning into 'Chat-Room'...
remote: Enumerating objects: 31, done.
remote: Total 31 (delta 0), reused 0 (delta 0), pack-reused 31
Unpacking objects: 100% (31/31), done.
kmin@Kminpi:~/html $
```

Fork한 것을 사용자아이디로 들어가서 html 디렉토리로 이동한 후 clone한다.
(git clone [주소])

```
kmin@Kminpi:~/html $ ls
blog  Chat-Room  index.html  master.zip  stopwatch
```

클론한 내용들이다.

```
kmin@Kminpi:~/html $ vi Chat-Room/connection.php
```

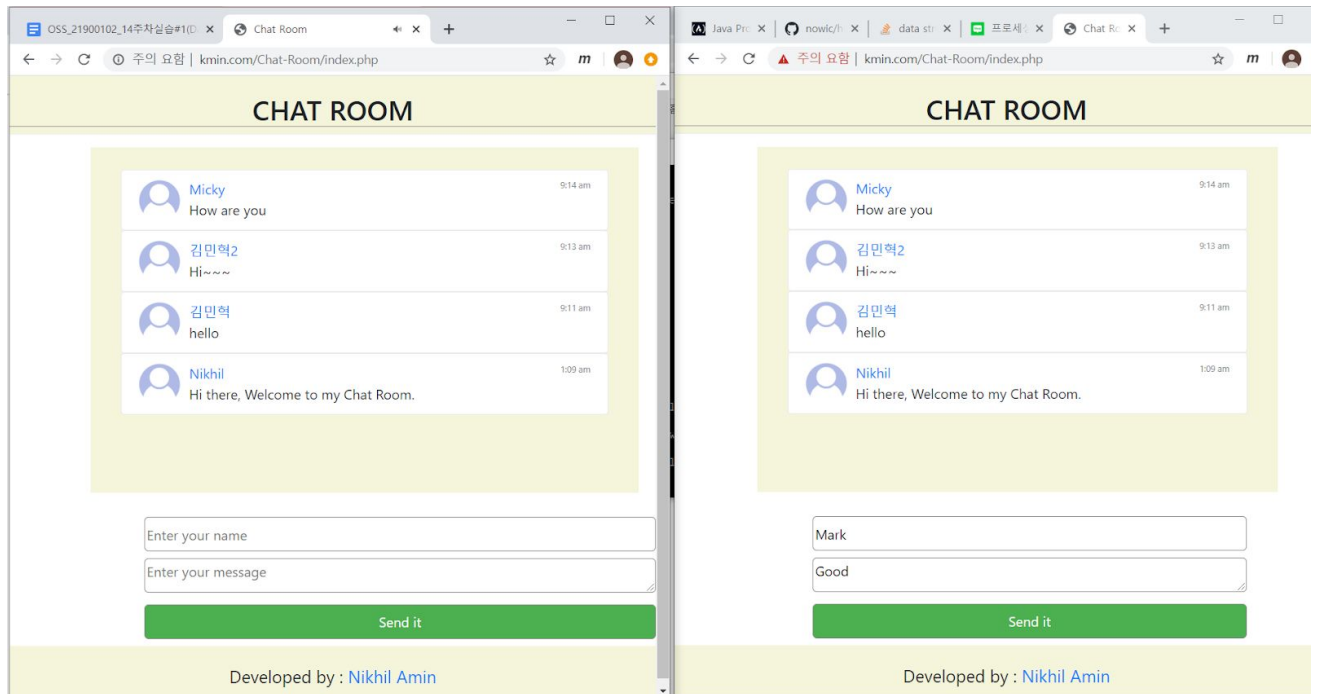
```
<?php
$host = "localhost";
$user = "db_kmin";
$pass = "1234";
$db name = "userdb";
$con = new mysqli($host, $user, $pass, $db_name);
function formatDate($date){
    return date('g:i a', strtotime($date));
}
?>
~
~
```

다음 부분에 주의하여 해당 파일을 수정한다.

사용자 DB에 테이블 생성 (테이블 소스를 만들어내는 파일을 userdb에 넣는다.)(sql = structured query language/데이터 베이스를 조작하는 언어)

```
kmin@Kminpi:~/html $ mysql -u db_kmin -p userdb < Chat-Room/database/chat.sql
Enter password:
kmin@Kminpi:~/html $
```

<웹사이트 접속해보기!!!>



브라우저를 두개를 띄워서 test해보니 다음과 같이 실시간으로 양쪽창에 보낸 내용이 뜨게 되어 채팅기능이 잘 돌아간다!!!