# MySQL installation guide (Ubuntu 18.04 LTS)

## Install MySQL

This article describes a basic installation of a MySQL database server on the Ubuntu. Please open the terminal

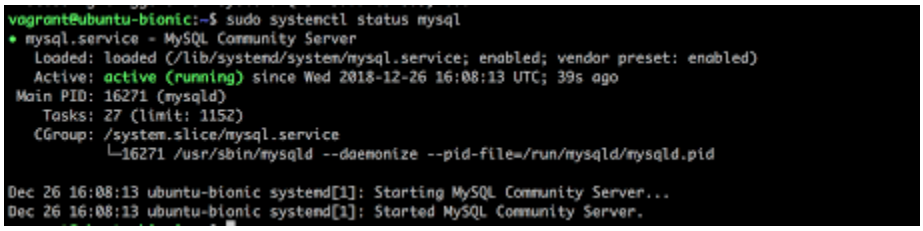
```
sudo apt-get update
sudo apt-get install mysql-server
```

The installer installs MySQL and all dependencies.

Once the installation is completed, the MySQL service will start automatically. To check whether the MySQL server is running, type:

```
sudo systemctl status mysql
```

output:




## Securing MySQL

sudo mysql_secure_installation

It will prompt you some security options that you should choose in order to secure the MySQL server:

- Remove anonymous users? (Press y|Y for Yes, any other key for No) : y
- Disallow root login remotely? (Press y|Y for Yes, any other key for No) : y
- Remove test database and access to it? (Press y|Y for Yes, any other key for No): y
- Reload privilege tables now? (Press y|Y for Yes, any other key for No) : y

## Connect to MySQL server

```
sudo mysql -u root -p
```

It will prompt for the password of the root account. You enter the password and press `Enter`, the following command will show if the password is valid:

```
mysql>
```

# Set the root password

Type following command in the `mysql` shell, replace `password` with your new password:

```
UPDATE mysql.user SET authentication_string = PASSWORD('password') WHERE User = 'root';
```

To make the change take effect, reload the stored user information with the following command:

```
FLUSH PRIVILEGES;
```

# Creating a new database

```
sudo mysql -u root -p
```

```
CREATE DATABASE db_name;
```
- where db_name can be as an example: “pittask”

# Configure root password in config.txt - Pittask

Inside the root pittask folder find and open config.txt file in the text editor. Where you will find a line of the code as an example:

```
database_url = mysql://root:Psiturk_1@127.0.0.1:3306/pittask
```

```
database_url = mysql://USERNAME:PASSWORD@HOSTNAME:PORT/DATABASE
```

where USERNAME and PASSWORD are your access credentials for the database, HOSTNAME is the DNS entry or IP address for the database, PORT is the port number (standard is 3306) and DATABASE is the name of the database on the server.

Use 127.0.0.1 as the HOSTNAME for a database running locally to the psiTurk server rather than ‘localhost’. **Mysql** treats the HOSTNAME ‘localhost’ as a special case in Unix-based systems and will cause the psiTurk server to fail to boot

For further information please refer to the:
https://psiturk.readthedocs.io/en/stable/configure_databases.html

If all steps has been done correctly you can proceed with the launching pittask experiment. On the first pittask launching you probably can see a message:

```
To use a MySQL database you need to install the `pymysql` python package.  Try `pip install pymysql`
```

Please install required package and after that you can successfully launch pittask experiment.

# Creating an RDS Instance

If you use Amazon's RDS to host your MySQL database you may incur additional charges. The price per starter db.t3.micro will be ~$12 monthly. Right now it is hard to say if db.t3.micro instance will be enough. According to preliminary data db.t3.micro can collect a data up to 1000 participants.

https://psiturk.readthedocs.io/en/stable/configure_databases.html

A link is contained information how to setup an RDS instance on AWS, but I haven't tested it yet. I will finalize information when I will have more information of RDS.

# R script

To be able successfully convert MySQL data to CSV. You will need to connect R script to your MySQL database. As seen from the example below you need to change a password and database name.

```
connection = dbConnect(MySQL(), user = 'root', password='Psiturk_1', dbname = 'pittask', host='127.0.0.1')
```