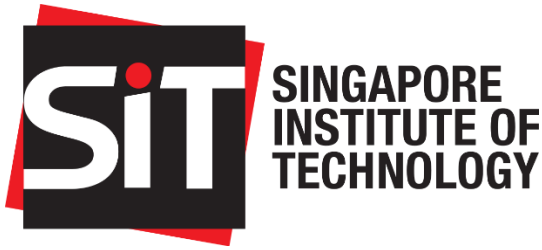

ICT2101/2201 Introduction to Software Engineering

User Manual

AY2021/2022, Trimester 1

2x01 Project: Maze-Running Robot

Lab group P1-Team 2

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1. About

Maze-Running Robot is a website that provides a visual and interactive way in aiding students to learn about logic and basic programming through the use of a robotic car and a web interface. You can use the web interface to send commands to the robotic car in order to navigate a maze, view the status of the robotic car and even customise your own maze.

To play on our site, please refer to our Github Repository (https://github.com/Team01-2/ICT2101-2201-Team-Project) and download/pull from our **MAIN** Branch.

2. Pre-requisites

For our website to run optimally with minimum errors, you are encouraged to refer to the following sections below on what are the prerequisites and install any packages that may be lacking in your system.

1.1 Python 3.8

This website requires python 3.8 to be installed in your Windows machine. To install python 3.8, please refer to the official Python website (https://www.python.org/downloads/windows/) and scroll down to the section for Python 3.8 to download the Windows installer.

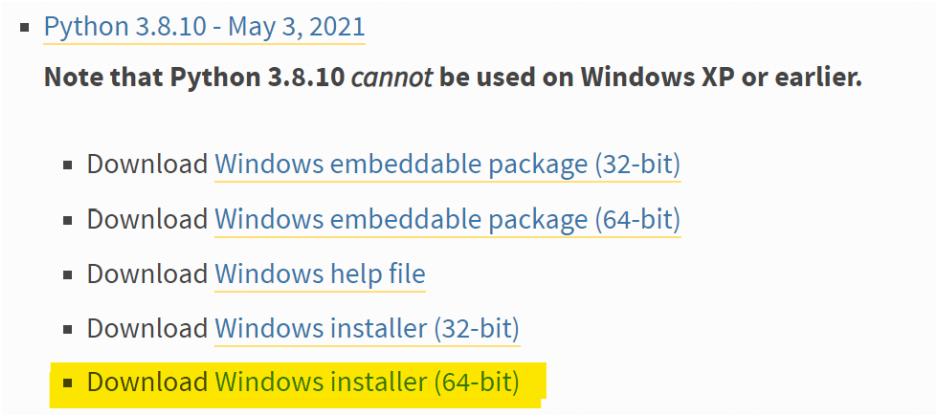

Figure 1 - Example of Python 3.8 installer

1.2 MySQL

This website requires a MYSQL server to run. To install the MYSQL server, visit https://dev.mysql.com/downloads/installer/ to download the MySQL installer and select "mysql-installer-community".

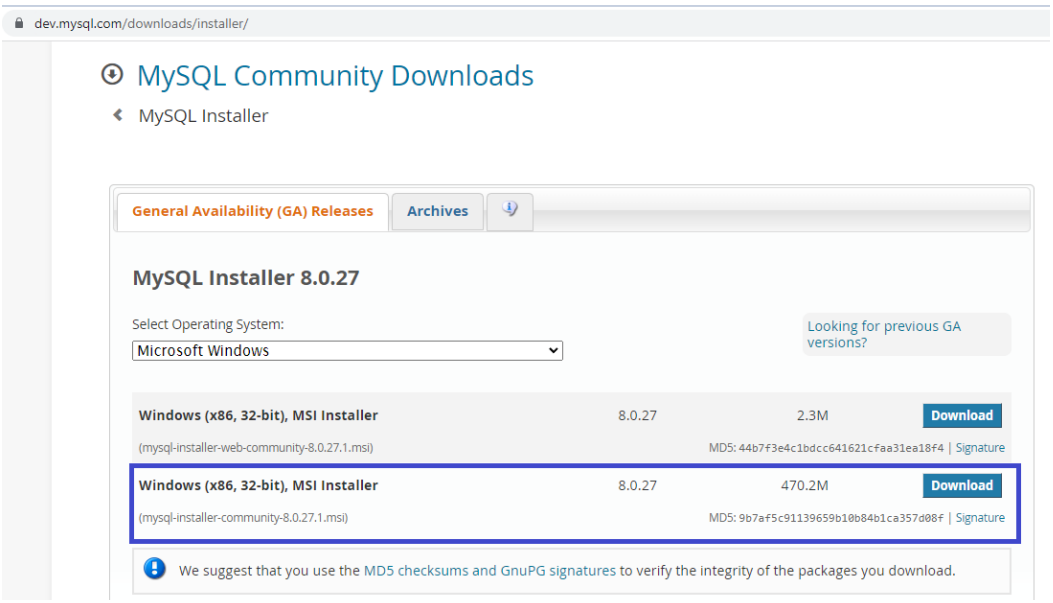

Figure 2 - MySQL Community installer

After clicking the "Download" button, you will be directed to the next page. Click "Download Now" to start the download.

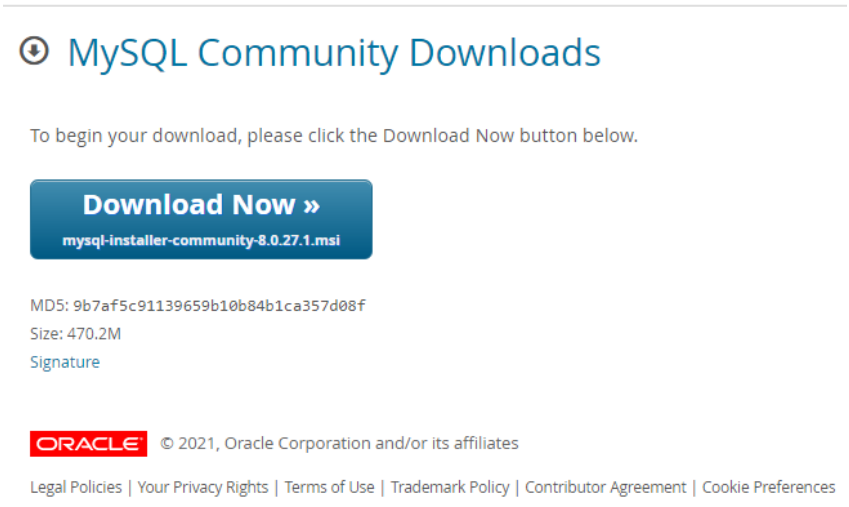

Figure 3 - MySQL Community installer

3. MySQL Database Setup

The first action after pulling from the main branch in Github would be to set up the Database for our website. Once you have downloaded the installer for MySQL, click on the installer and select *custom.* Click “Next > ” to continue.

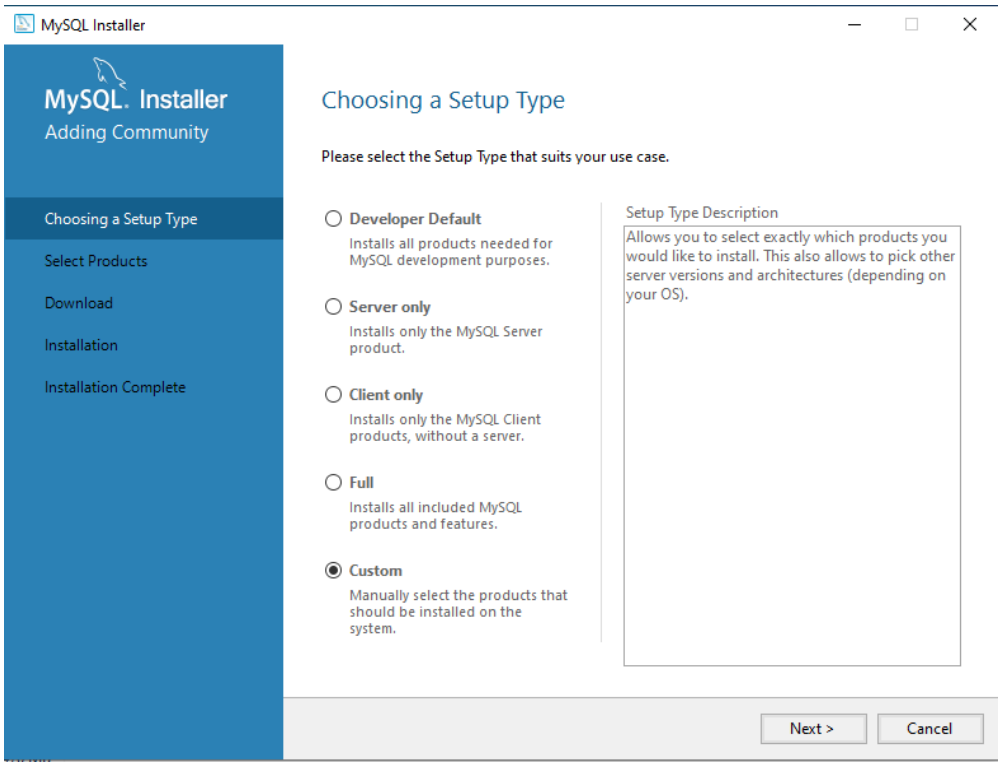

Figure 4 - MySQL “Setup” Section

On the “Select Products” section, select *MySQL Server, Connector/Python 8.0.27, MySQL Documentation* and click “Next >”.

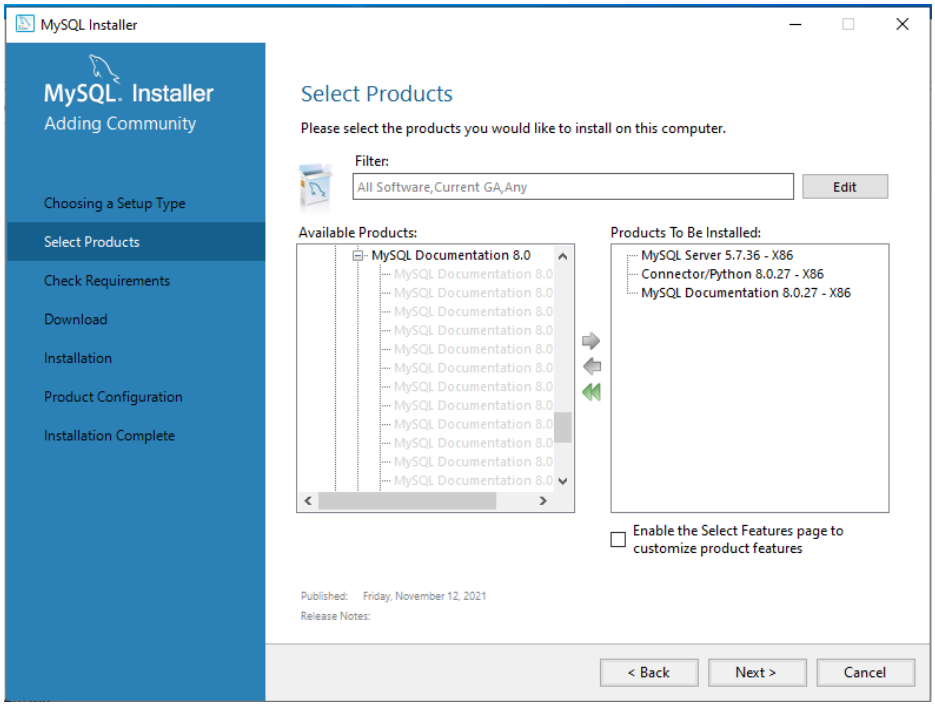

Figure 5 - MySQL "Select Products" Section

Click "Execute".

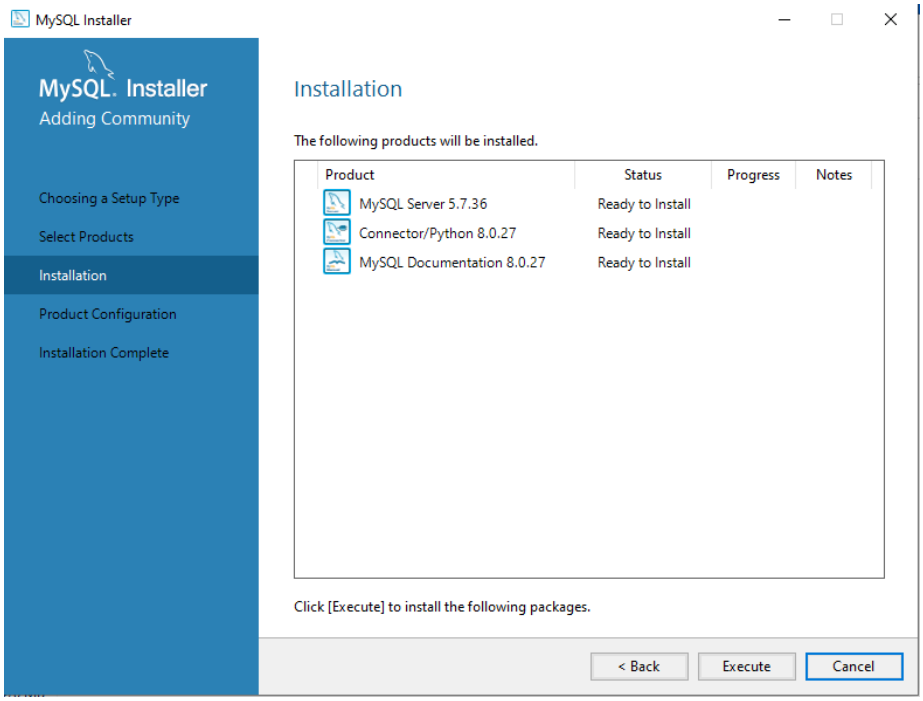

Figure 6 - MySQL Installation

Once the installation is completed, click "Next >".

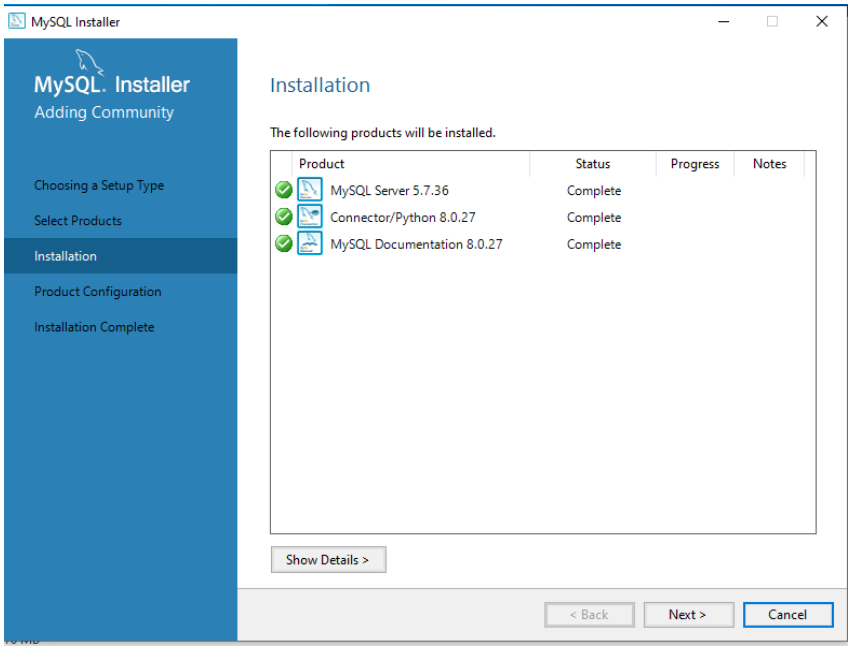

Figure 7 - MySQL Installation complete

Click “Next >”.

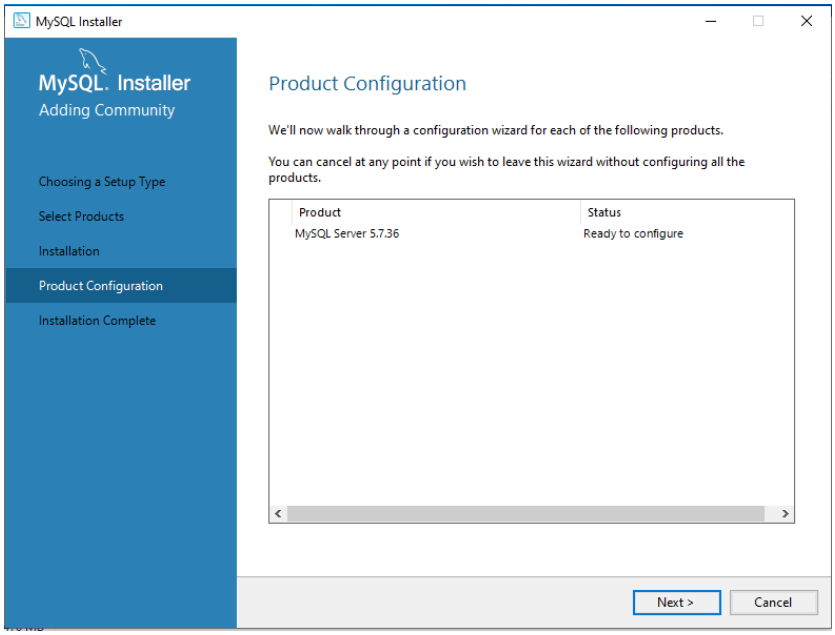

Figure 8 - MySQL Product Configuration section

Leave the configuration as default and click “Next >”.

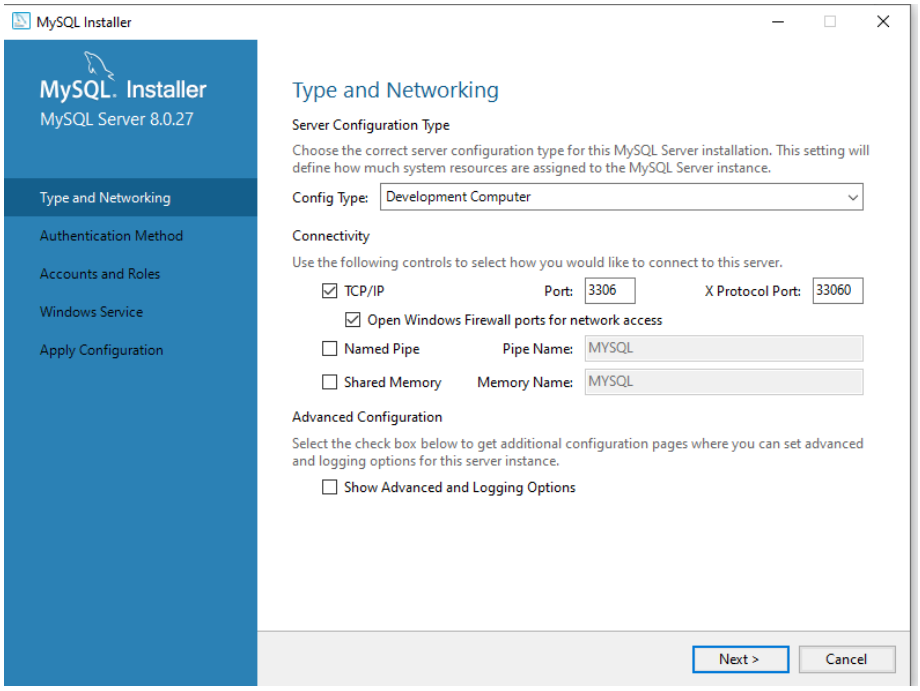

Figure 9 - MySQL Default Product Configuration

Click “Next >”.

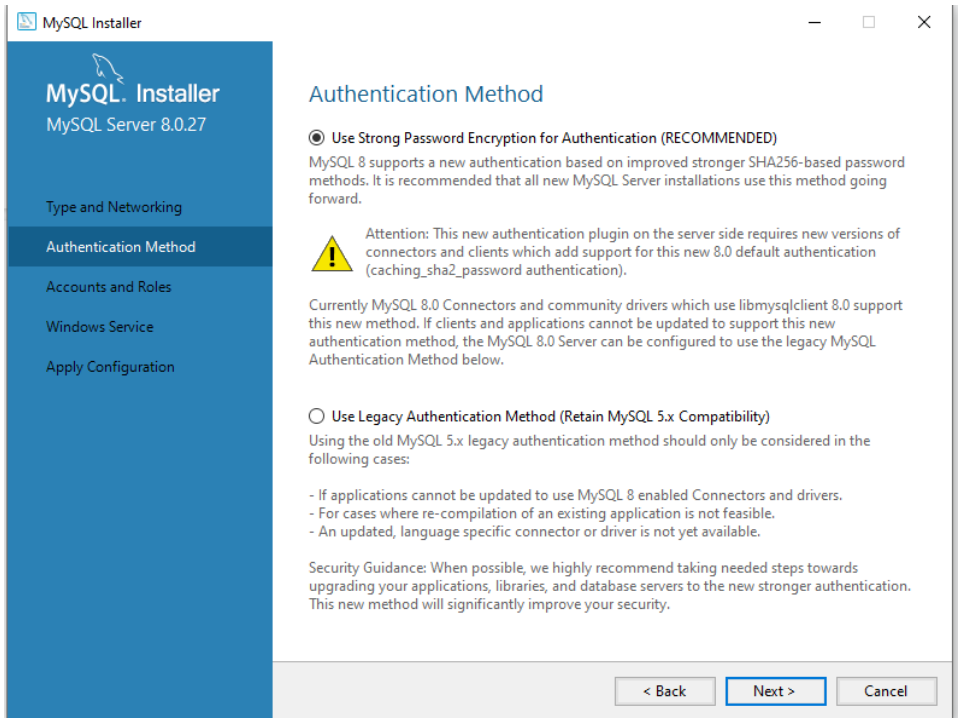

Figure 10 - MySQL Authentication Method Section

Under the “Accounts and Roles” section, enter your chosen password and click “Next >”.

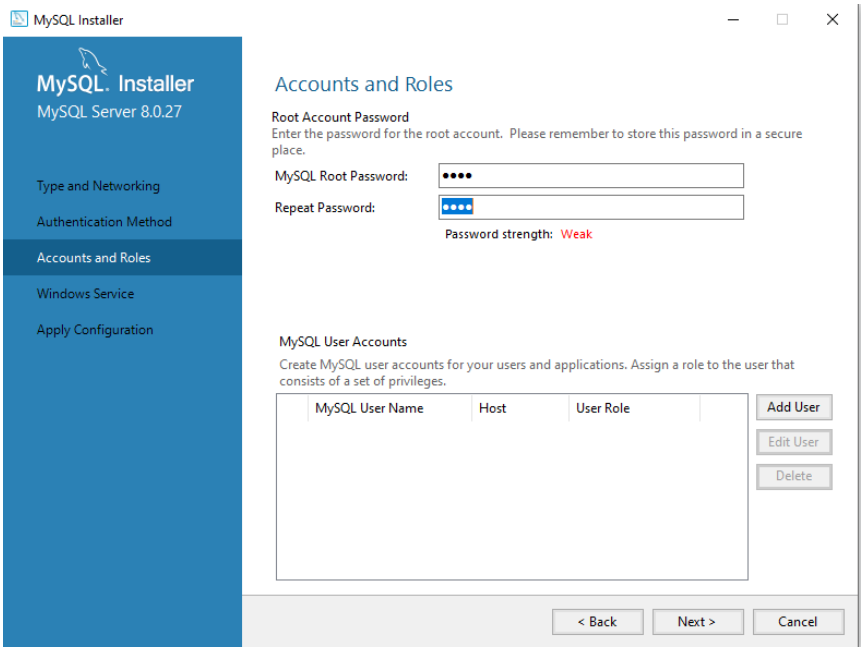

Figure 11 - MySQL Accounts & Roles Section

Leave the configuration as default and click “Next >”.

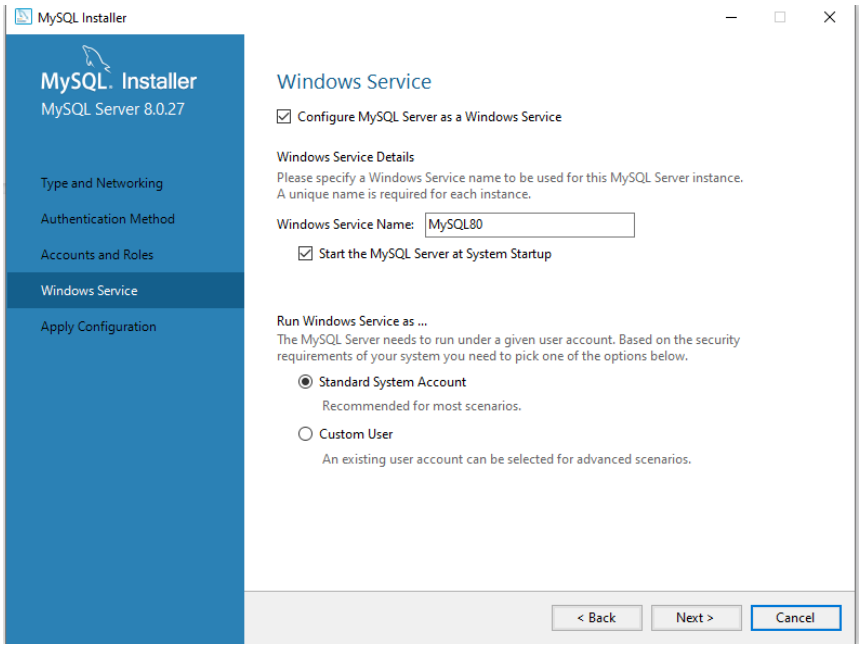

Figure 12 - MySQL Windows Service Section

Once you have reached the “Apply Configuration” section, click “Finish”.

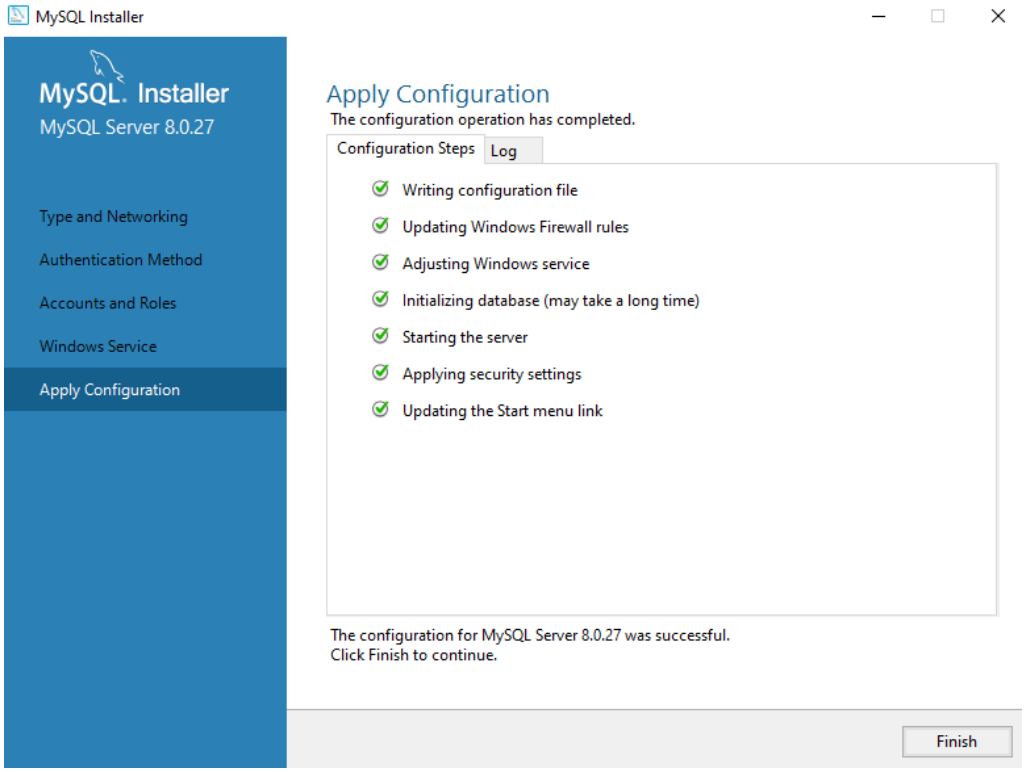

Figure 13 - MySQL Apply Configuration Section

Open MySQL Workbench and double click on the Local Instance.

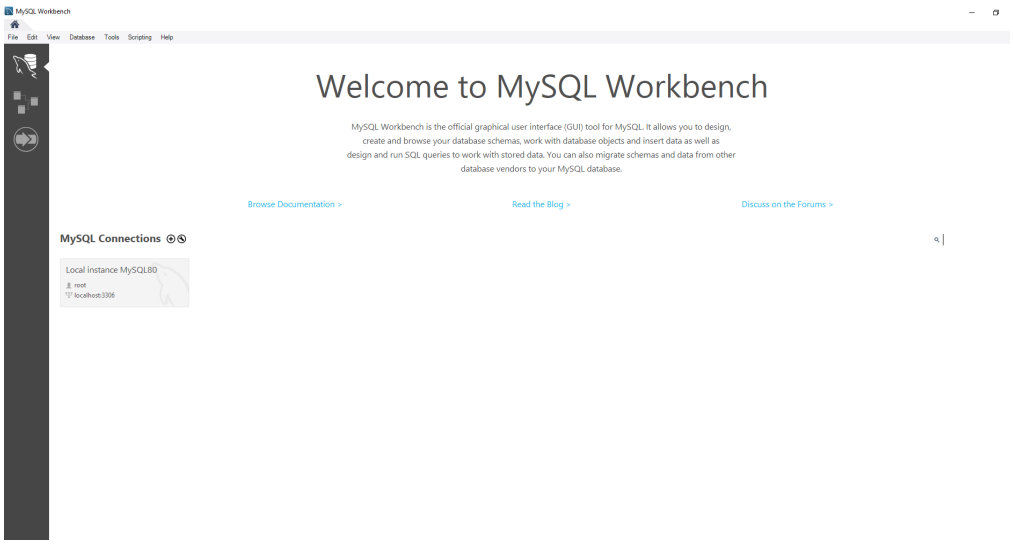

Figure 14 - MySQL Workbench

Enter the password you have set before.

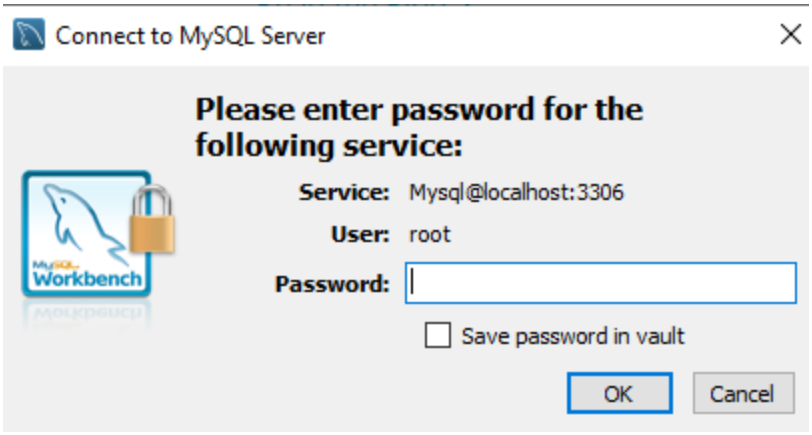

Figure 15 - Enter account credentials

Insert the statements given in dbcreate.txt and click on the lightning symbol to execute the statements. The dbcreate.txt can be found in the main branch in Github (https://github.com/Team01-2/ICT2101-2201-Team-Project)

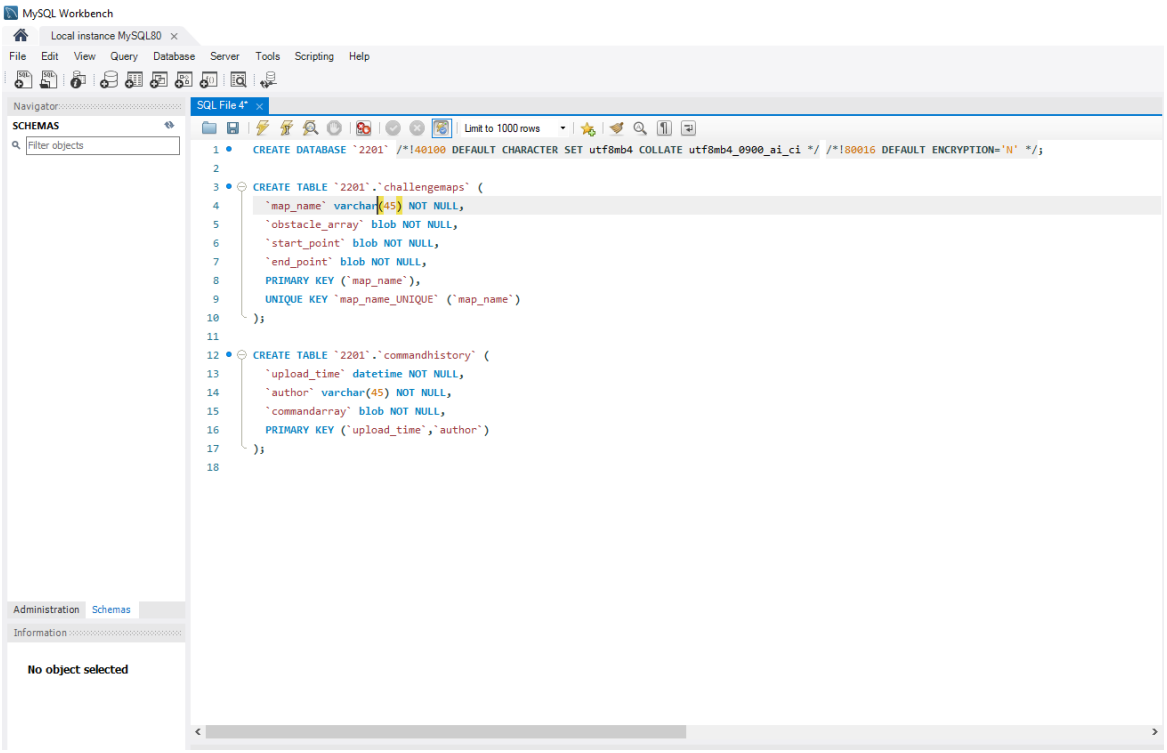

Figure 16 - Enter provided statements

After executing the statements, refresh on the schemas tab the database. The tables should appear as shown based on the picture below.

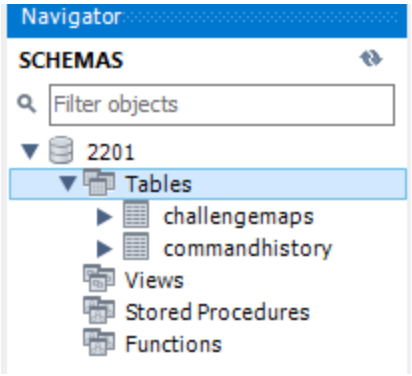

Figure 17 - Tables created

Once MySql database has successfully been installed enter the following in the command prompt “pip install mysql-connector-python” and “pip install flask”.

```
C:\Users\khair>pip install mysql-connector-python
Collecting mysql-connector-python
  Downloading mysql_connector_python-8.0.27-py2.py3-none-any.whl (341 kB)
     |████████████████████████████████| 341 kB 99 kB/s
Collecting protobuf>=3.0.0
  Downloading protobuf-3.19.1-py2.py3-none-any.whl (162 kB)
     |████████████████████████████████| 162 kB 312 kB/s
Installing collected packages: protobuf, mysql-connector-python
Successfully installed mysql-connector-python-8.0.27 protobuf-3.19.1
WARNING: You are using pip version 21.2.3; however, version 21.3.1 is available
You should consider upgrading via the 'C:\Users\khair\AppData\Local\Microsoft\W
```

Figure 18 - Pip install mysql-connector-python

```
C:\Users\khair>pip install flask
Collecting flask
  Using cached Flask-2.0.2-py3-none-any.whl (95 kB)
Requirement already satisfied: Jinja2>=3.0 in c:\users\khair\appdata\local\packages\pythonsoft
Requirement already satisfied: Werkzeug>=2.0 in c:\users\khair\appdata\local\packages\pythonso
Requirement already satisfied: itsdangerous>=2.0 in c:\users\khair\appdata\local\packages\pyth
Requirement already satisfied: click>=7.1.2 in c:\users\khair\appdata\local\packages\pythonsof
Requirement already satisfied: colorama in c:\users\khair\appdata\local\packages\pythonsoftwar
Requirement already satisfied: MarkupSafe>=2.0 in c:\users\khair\appdata\local\packages\python
Installing collected packages: flask
  WARNING: The script flask.exe is installed in 'C:\Users\khair\AppData\Local\Packages\PythonS
  Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-
Successfully installed flask-2.0.2
WARNING: You are using pip version 21.2.3; however, version 21.3.1 is available.
You should consider upgrading via the 'C:\Users\khair\AppData\Local\Microsoft\WindowsApps\Pyth
```

Figure 19 - Pip install flask

4. Website Setup

Once you have pulled from the main branch in Github and done setting up the Database for our website. You will be ready to run our website.

1. Extract out the folder and open your command prompt.
2. Navigate and change your directory to "<the path you have downloaded this folder >\Pycharm Proj".
3. Enter "python flask1.py"
4. Copy the URL for the website into any web browser. (http://127.0.0.1:5000/)

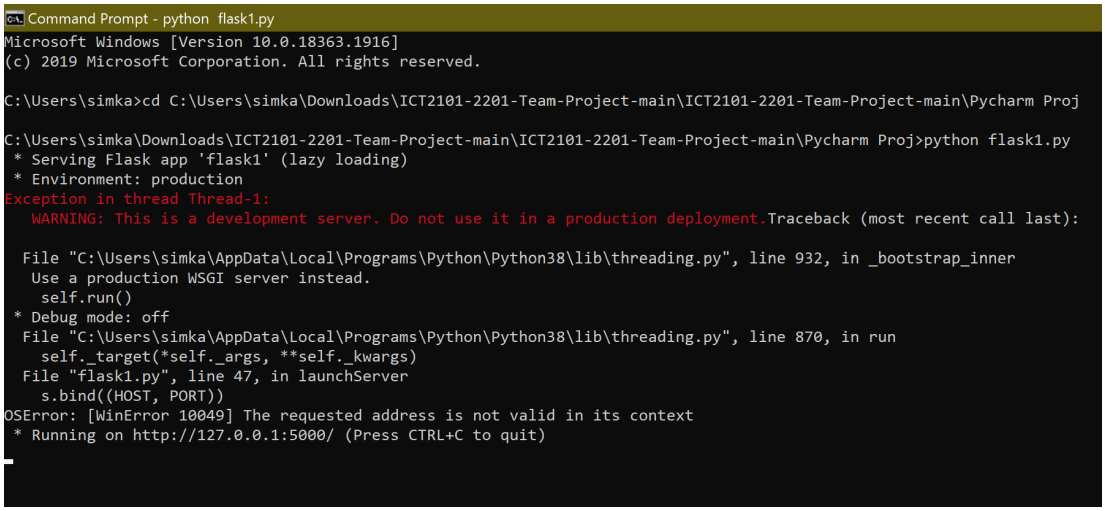

Figure 20 - Running in Command Prompt

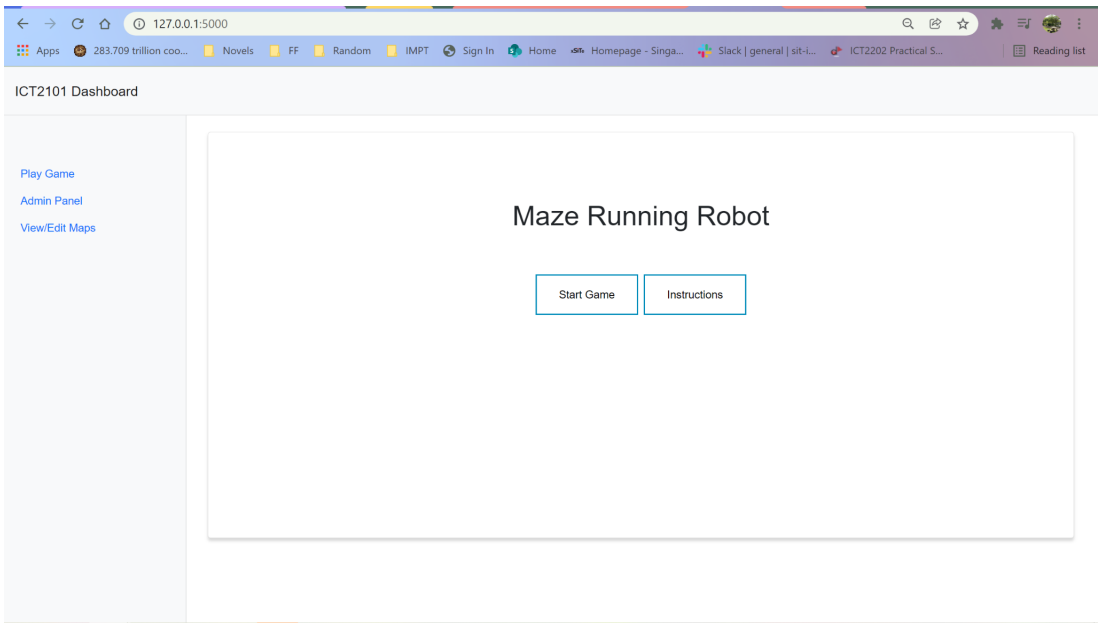

Figure 21 - Successfully accessed website