Project Deployment Instruction
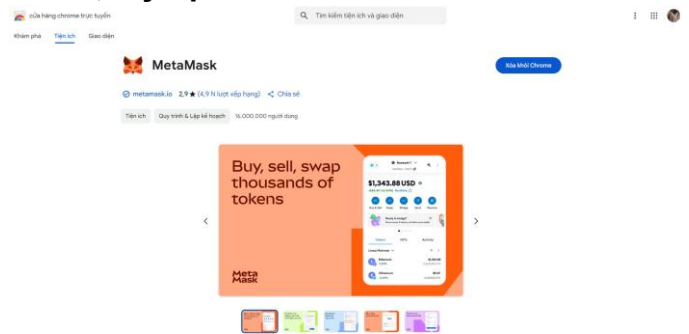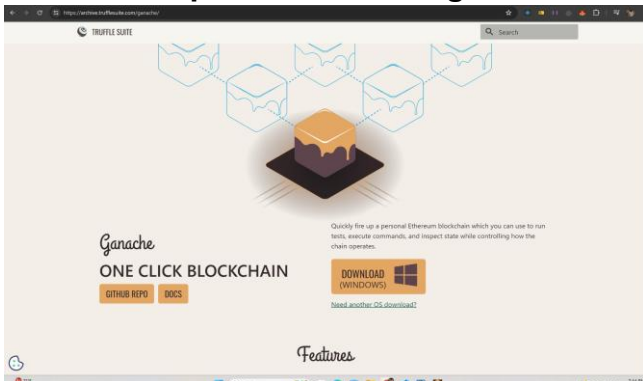
To deploy the project, follow these steps:

*Link GitHub: https://github.com/COS30049-SUVHN/group-project-spr-2025-g5.git *

Step 1 - Open terminal , enter this git command to clone project:

- git clone https://github.com/COS30049-SUVHN/group-project-spr-2025-g5.git

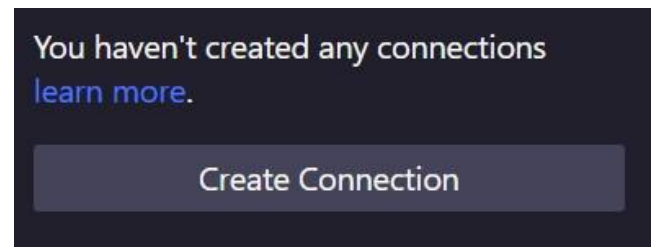**Step 2 - DownLoad ganache GUI, Metamask , mysql workbench**

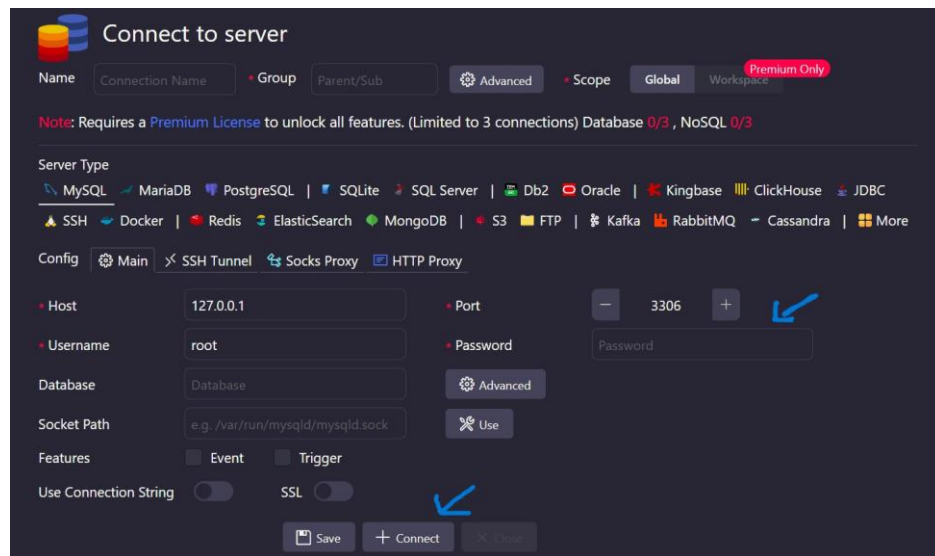**Step 3 - Set up Backend connect with Database:**

3.1 - Install MySQL extension in vscode:

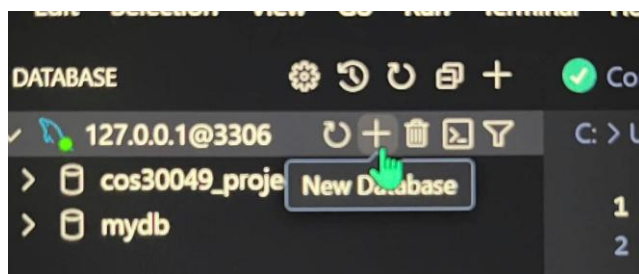1- search "mysql" , find extension like image below and click install

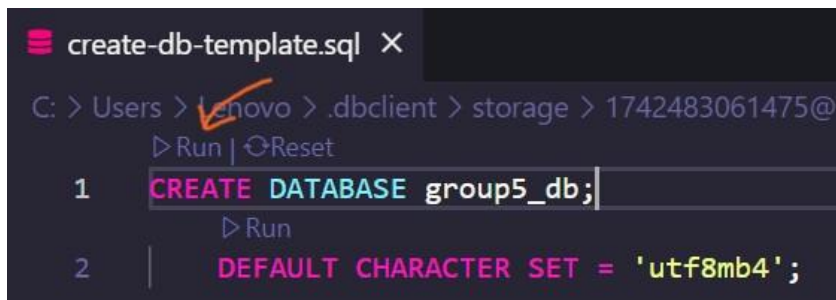2 - click that extension ,and click Create Connection

3- **Enter the password** based on your **MySSQL Workbench server** (Change Host, Username, Port   as well if needed) then **click connect ,** no need to config Name and Group

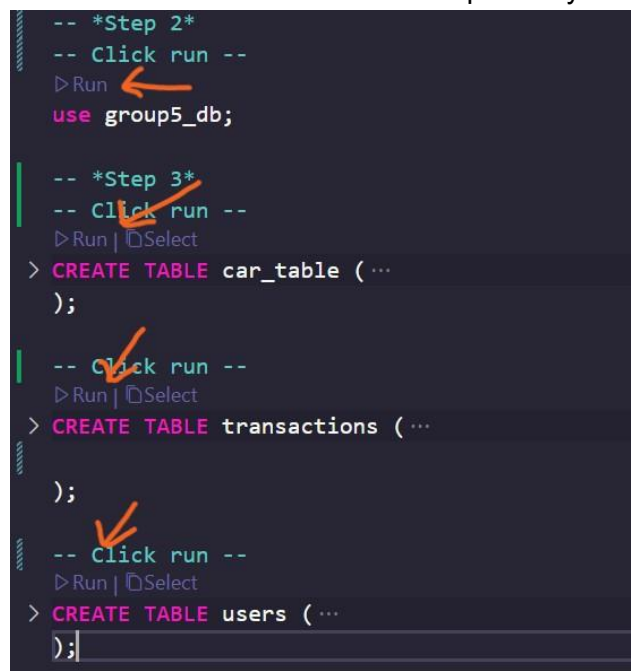4 - It will show a connection folder like this, then **click new database icon** to create database:

5 - It will show a file like this , then copy and paste
 "**CREATE DATABASE group5_db;**" into this page and click 'Run' command above that code

6 - Go back to project folder , move to **database.sql** in **backend/Api/database.sql**
- click 'Run' in command **use group5_db;**
- Then click 'Run' in Create tables respectively:

NOTE: IF it show err in OUTPUT , you can ignore it

7- Go back to mysql extension check if all 3 table are created :
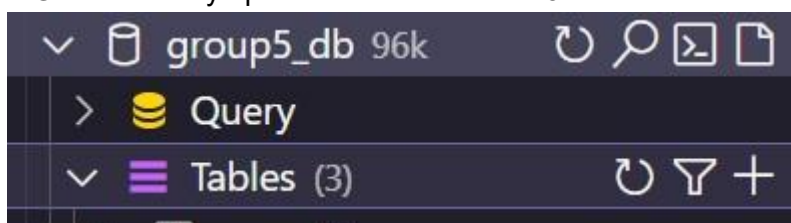
3.2 - Change specification of index.js to connect to MySQL server :

8 - Go to **index.js** in **backend/Api/index.js ,** Change these specifications based on your **MySQL Workbench server** :
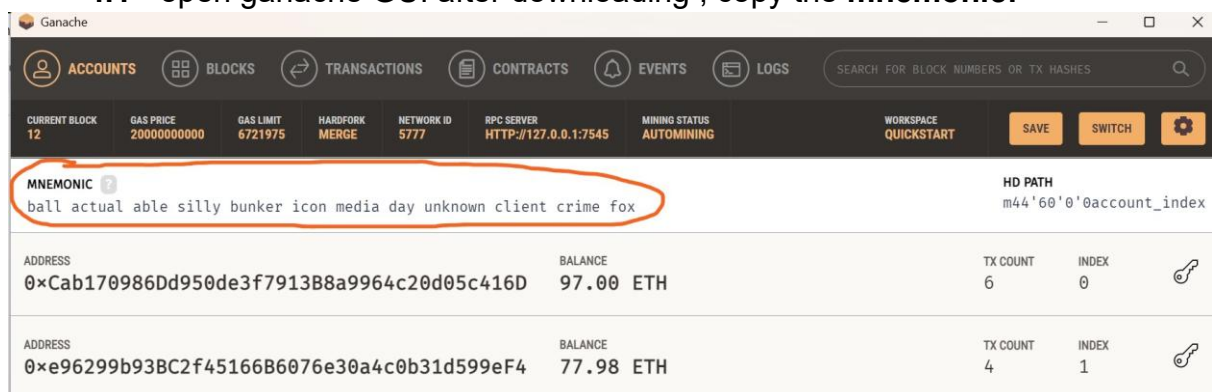
```
10      // MySQL connection setup
11      const db = mysql.createConnection({
12          host: "localhost",      // Config this only
13          user: "root",           // Config this only
14          password: "root123",    // Config this only
15          database: "group5_db"
16      });
```

Step 4 - Set up Backend connect with smart contract:

4.1 - open ganache GUI after downloading , copy the **mnemonic:**

4.2 - open **hardhat.config.js** file in **backend/Dapp/hardhat.config.js :**

- Paste the mnemonic into code line 17:

```
5   module.exports = {
6     // CONNECT TO HARDHAT as Default:
7     defaultNetwork: "hardhat",
8     networks: {
9       hardhat: {
10        chainId: 31337
11      },
12      // CONNECT TO GANACHE:
13      ganache: {
14        url: "http://127.0.0.1:7545",
15        // accounts: [ " 0x... ", ],
16        accounts: {
17          mnemonic: " ball actual able silly bunker icon media day unknown client crime fox ", /
18        },
19        chainId: 1337
20      },
21    },
22    solidity: {
```
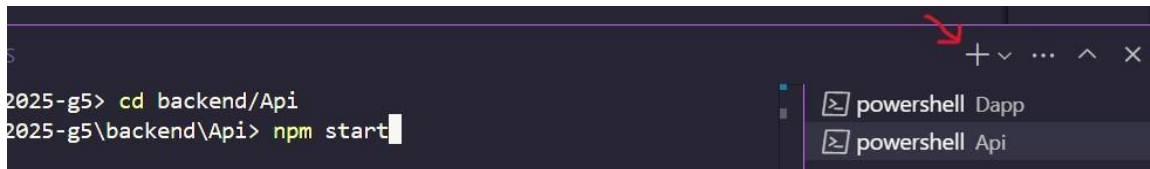
Step 5 - Use command to run project:

5.1 - Install and Deploy smart contract in terminal:

- **Open Terminal**
- **cd backend/Dapp**
- **npm install**
- **npx hardhat run ignition/deploy.js --network ganache**

5.2 - Install and Initializing the backend server :
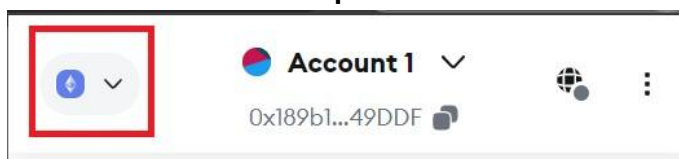
- **Click this icon to create new terminal**

- **cd backend/Api**
- **npm install**
- **npm start**

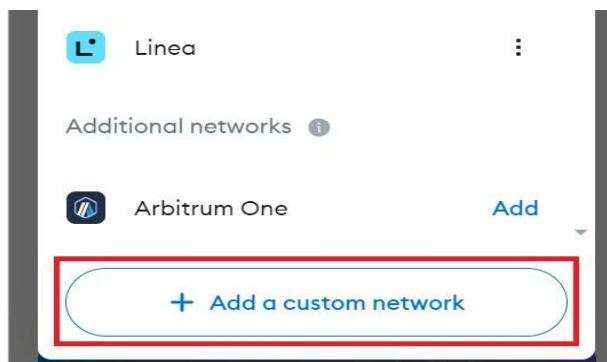## 5.3 - Install and Initializing the frontend :

- **click the icon + to create new terminal like above step**
- **cd frontend**
- **npm install**
- **npm run dev**

Step 6 - Setup Network in Metamask:

6.1 - click network on top left side:

6.2 - Click "Add a custom network" at the bottom

6.3 - Configure custom network like below here:

- Network name : Ganache
- Default RPC URL : http://127.0.0.1:7545/
- Chain ID : 1337
- Currency symbol : ETH
- Block explorer URL: ignore this

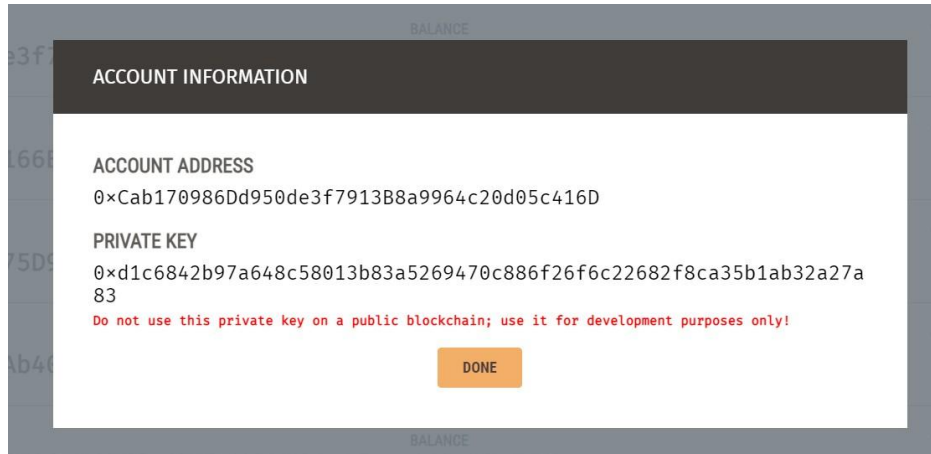## 6.4 - Click "Show test networks" and choose Ganache network

6.5 - Copy private key of accounts in Ganache and import it in ganache
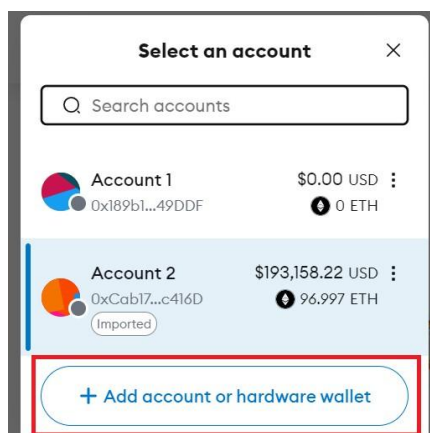
- Click in key icon

- Copy private key

- Move to Metamask ,Click in account tab ,Click "Add account or hardware wallet"

- Select import account and paste the private key, then click **"Import"**:

Add account

+ Add a new Ethereum account

⏻ Import account

⌁ Add hardware wallet

Enter your private key string here:

•••••••••••••••••••••••••••••••••••••••| ⊘

Cancel   Import