

Project Deployment Instruction

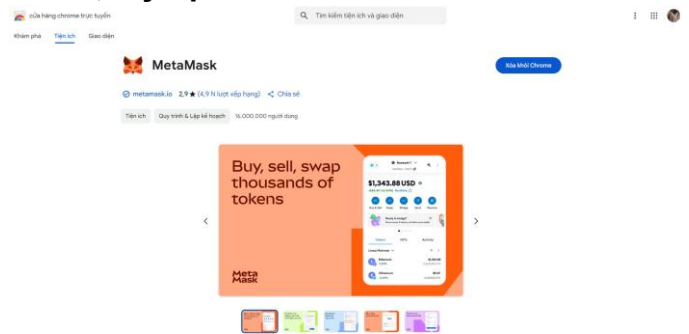
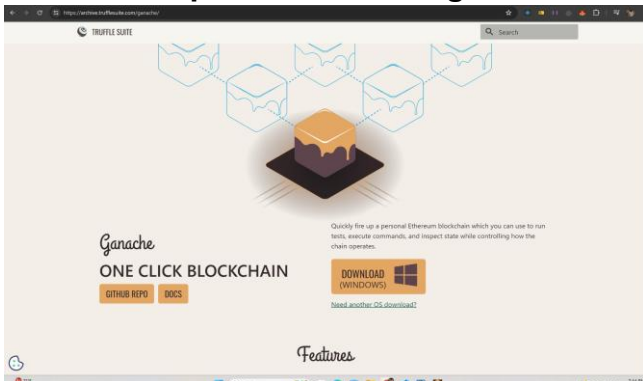
To deploy the project, follow these steps:

*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

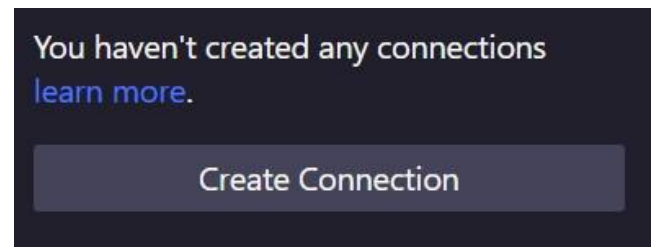


Step 3 - Set up Backend connect with Database:

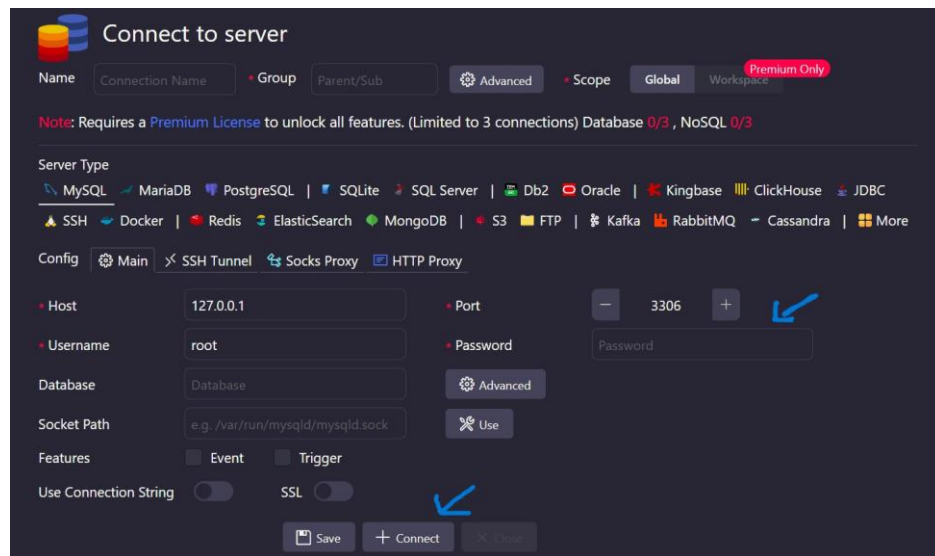
3.1 - Install MySQL extension in vscode:

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

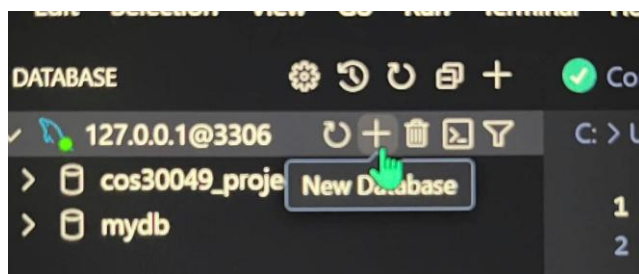
2 - click that extension ,and click Create Connection



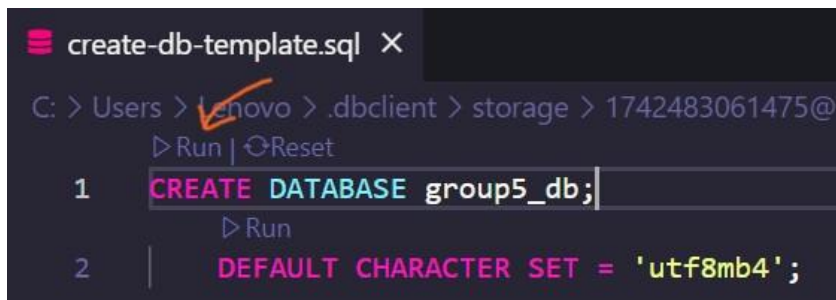
3- Enter the **password** based on your **MySQL Workbench server** (Change Host, Username, Port as well if needed) then **click connect** , no need to config Name and Group



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



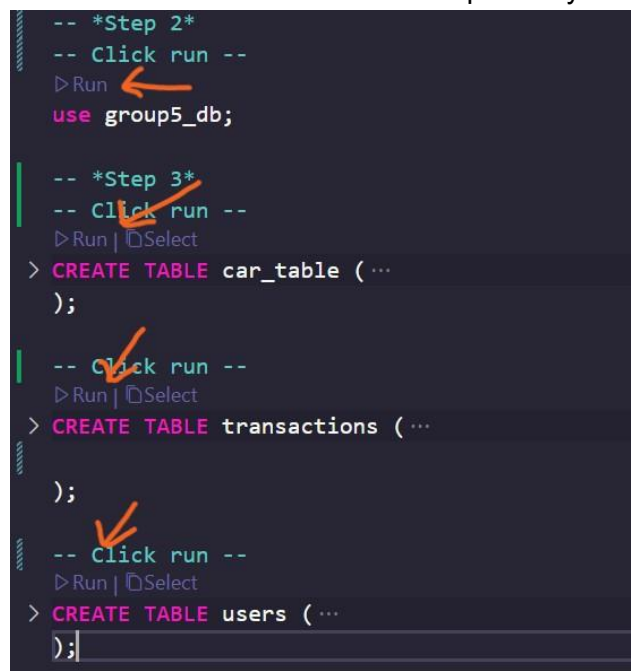
5 - It will show a file like this , then copy and paste
`"CREATE DATABASE group5_db;"` into this page and click 'Run' command above that code



The screenshot shows a code editor with a file named 'create-db-template.sql'. The path is 'C: > Users > Lenovo > .dbclient > storage > 1742483061475@'. The code contains two lines: '1 CREATE DATABASE group5_db;' and '2 DEFAULT CHARACTER SET = 'utf8mb4';'. There are orange checkmarks above the first line and an orange arrow pointing to the 'Run' button below it.

6 - Go back to project folder , move to **database.sql** in **backend/Api/database.sql**

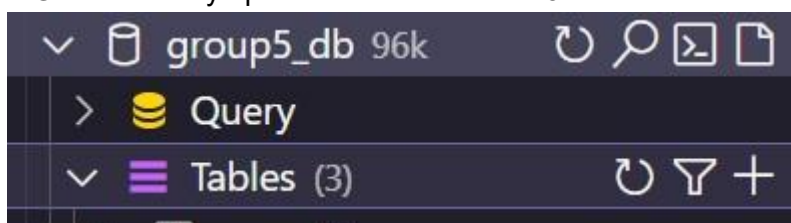
- click 'Run' in command **use group5_db;**
- Then click 'Run' in Create tables respectively:



The screenshot shows a code editor with a file named 'database.sql'. The code contains three sections: 'Step 2' with 'use group5_db;', 'Step 3' with 'CREATE TABLE car_table (...);', and 'Step 4' with 'CREATE TABLE transactions (...);'. There are orange checkmarks above each section and orange arrows pointing to the 'Run' buttons below each section.

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 :

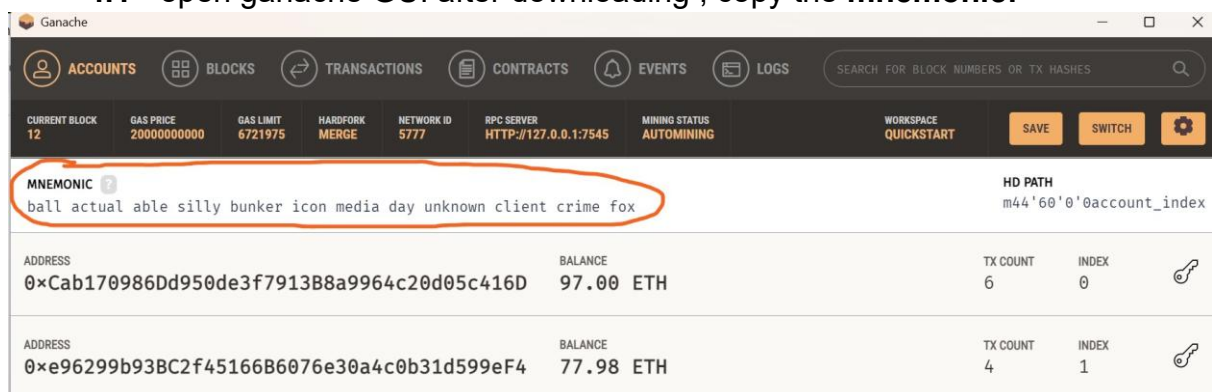
```

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:



The screenshot shows the Ganache GUI interface. The 'ACCOUNTS' tab is selected. The mnemonic 'ball actual able silly bunker icon media day unknown client crime fox' is displayed and circled in red. The HD path is 'm44'60'0'0account_index'. Below the mnemonic, two accounts are listed with their addresses, balances, and transaction counts.

ADDRESS	BALANCE	TX COUNT	INDEX
0xCab170986Dd950de3f7913B8a9964c20d05c416D	97.00 ETH	6	0
0xe96299b93BC2f45166B6076e30a4c0b31d599eF4	77.98 ETH	4	1

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: {

```

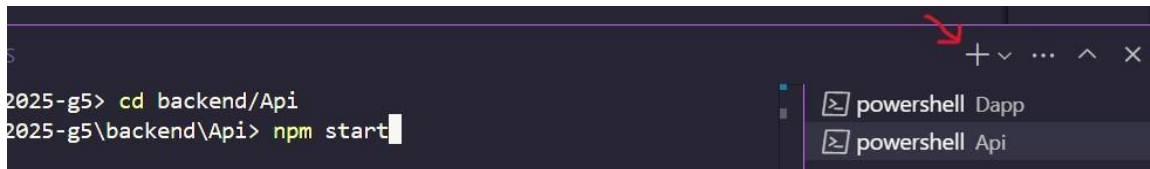
Step 5 - Use command to run project:

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



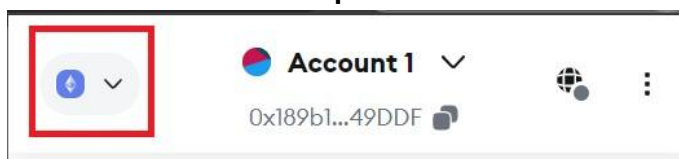
- `cd backend/Api`
- `npm install`
- `npm start`

5.3 - Install and Initializing the frontend :

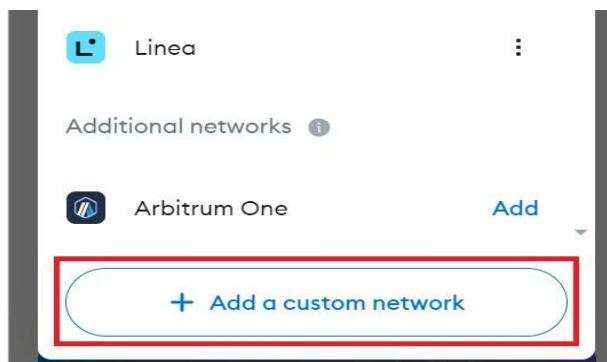
- click the icon + to create new terminal like above step
- `cd frontend`
- `npm install`
- `npm run dev`

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

< **Add a custom network** ×

Network name

Ganache

According to our records, the network name may not correctly match this chain ID.
Suggested name: Localhost 8545

Default RPC URL

127.0.0.1:7545

Chain ID

1337

Currency symbol

ETH

Block explorer URL

Save

6.4 - Click “Show test networks” and choose Ganache network

Show test networks ☒

S Sepolia

L Linea Sepolia

M Mega Testnet

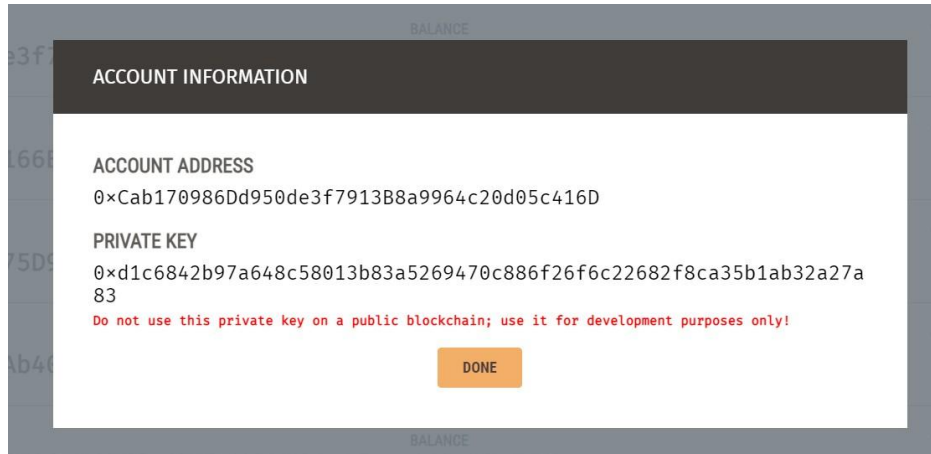
G Ganache

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

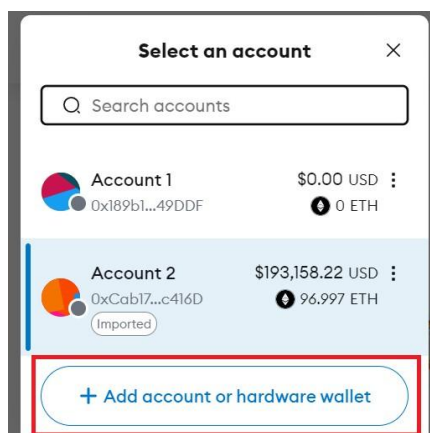
- Click in key icon



- 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”:

