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THE NATIONAL COLLEGE
Autonomous
Jayanagar, Bangalore-560070

PROJECT REPORT
ON
ETHEREUM BLOCKCHAIN BASED FURNITURE'S
PURCHASE SHOP APPLICATION

BY

Akash V

19NCJB436

Under the guidance of

Prof. VARADARAJ.R

**“Furniture's Purchase Shop” Project report submitted in partial
fulfillment of the requirements of
VI Semester BCA, National College, Jayanagar, Bangalore**



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THE NATIONAL COLLEGE

Autonomous Jayanagar,
Bangalore-560070

CERTIFICATE

This is to certify the project report titled “Furniture’s Purchase Shop Application” is a work done by **Akash V** of THE NATIONAL COLLEGE, Jayanagar, Bengaluru, in partial fulfillment of the requirements of **VI Semester BCA** during the year 2021-2022.

HEAD OF THE DEPARTMENT

PROJECT GUIDE

Examiners:

Examination Centre

1.

The National College,

2.

Jayanagar

Date of Examination:

ACKNOWLEDGEMENT

“Furniture’s Purchase Shop Application” is the project of many hands from the team. Our tribute for the successful completion of the project goes to all those who helped through their constant guidance and encouragement. The satisfaction that accompanies the success would be incomplete without thanking the person who made it.

We are thankful to our beloved Principal **Dr. Y.C KAMALA**, who encourages us to come with new and innovative ideas and for providing the environment with all facilities for completing the project.

We are also grateful to our Head of the Department Prof. **SHALINI.C** Department of computer science for valuable guidance and constant support during our project development.

We are also grateful to our project guide Prof. **VARADARAJ.R**, Department of computer science for his valuable guidance and constant support during our project development.

We extend our thanks to all our teaching staffs of the department of computer science. Finally, we thank one and all who helped us directly and indirectly for the completion of our project.

ABSTRACT

Purpose of this project is to design, develop and demonstrate the usage of Ethereum Blockchain “Furniture’s Purchase Shop” with Metamask and Ganacha Application having the following features:

- a)** Display the front-end on the default Browser with available Furnitures for Purchase in the Shop
- b)** Purchase a Furniture by clicking on the “Purchase” button
- c)** Metamask should be able to calculate the transaction fees for storing the purchase transaction in the Ganache Blockchain
- d)** Ganache should record the purchase transaction and it should be verifiable
- e)** Furniture once purchased should not have the option of purchasing again
- f)** Using one Ganache Ethereum Account the Account holder should be able to purchase more than one Furniture
- g)** Using different Ganache Ethereum accounts, the account holder should be able to purchase Furnitures and verify the related transactions in Ganache

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INTRODUCTION

BLOCKCHAIN:-

In a few words, a blockchain is a digital ever-growing list of data records. Such a list is comprised of many blocks of data, which are organized in chronological order and are linked and secured by cryptographic proofs.

The first prototype of a blockchain is dated back to the early 1990s when computer scientist Stuart Haber and physicist W. Scott Stornetta applied cryptographic techniques in a chain of blocks as a way to secure digital documents from data tampering.

Although the blockchain technology is older than Bitcoin, it is a core underlying component of most cryptocurrency networks, acting as a decentralized, distributed and public digital ledger that is responsible for keeping a permanent record (chain of blocks)

WHAT IS ETHEREUM BLOCKCHAIN?

Ethereum is a decentralized blockchain platform that establishes a peer-to-peer network that securely executes and verifies application code, called smart contracts. Transactions are sent from and received by user-created Ethereum accounts. A sender must sign transactions and spend Ether, Ethereum's native cryptocurrency, as a cost of processing transactions on the network.

DEFINING THE PROBLEMS :-

Data storage and security

Transactions processing and
intermediaries Supply chains

Intellectual property

Government
operations

Charity, Voting and Crowd funding

ADVANTAGE :-

Data Storage and Security:-

Blockchain can potentially solve the data storage issue thanks to its decentralized and distributed nature.

Transactions processing and intermediaries:-

The structure of blockchain enables a real-time audit for all the transactions, securing them from any modifications.

Supply chains:-

Blockchain technology is seen as one of the most promising technologies for supply-chain management.

Government operations :-

Blockchain can make the taxation systems more efficient by automatically checking tax records for fraud.
Charity, Voting and Crowd funding:-

Blockchain can transform the charity sector significantly. First of all, it can boost the trust of the population by making the donations transparent.

DISADVANTAGES:-

- Regulations.
- Criminal activities.
- Energy consumption.

SCOPE OF BLOCK CHAIN :-

For obvious reasons, Blockchain technology's future scope majorly lies in the field of Cybersecurity.

KEY DIFFERENCE : Bitcoin vs Ethereum

BlockChain	Bitcoin
A Distributed Database	A cryptocurrency
To provide a low cost, safe and secure environment for peer to peer transactions	To simplify and increase the speed of transactions without much of government restrictions.
Blockchain can easily transfer anything from currencies to property rights of the stock	Bitcoin is limited to trading as a currency.

CONCLUSION:-

The Bitcoin is the first successful implementation of blockchain. Today, the world has found applications of blockchain technology in several industries, where the trust without the involvement of a centralized authority is desired. So welcome to the world of Blockchain

I) Project Goal (Problem Statement)

To design, develop and verify the “Furniture’s Purchase Shop Application” having the following features:

- a) Display the front-end on the default Browser with available Furnitures for Purchase in the Shop
- b) Purchase a Furniture by clicking on the “Purchase” button
- c) Metamask should be able to calculate the transaction fees for storing the purchase transaction in the Ganache Blockchain
- d) Ganache should record the purchase transaction and it should be verifiable
- e) Furniture once purchased should not have the option of purchasing again
- f) Using one Ganache Ethereum Account the Account holder should be able to purchase more than one Furniture
- g) Using different Ganache Ethereum accounts, the account holder should be able to purchase Furnitures and verify the related transactions in Ganache

II) Solution Proposed

- 1) We will design, develop, implement and verify the Ethereum Blockchain based solution namely “Furniture’s Purchase Shop Application” which will be executed in a Windows System. The proposed Solution will meet all the features specified in the Problem statement

III) Input Data and Images

Furniture’s Input Data:

id	name	details	price	warranty	pictures	purchaser
0	Double Bed	King-size double bed	47,989	12 months	image/double-bed.jpeg	not purchased
1	Dining Table with Chairs	6 seater dining set	56,989	12 months	image/dining table.jpeg	not purchased
2	Sofa Set	5 seater sofa set	61,787	6 months	image/sofa.jpeg	not purchased
3	Computer Table	Computer table with drawers	22,549	6 months	image/computer.jpeg	not purchased
4	Computer Table	Computer table with drawers	22,549	6 months	image/computer.jpeg	not purchased
5	Sofa Set	5 seater sofa set	61,787	6 months	image/sofa.jpeg	not purchased
6	Dining Table with Chairs	6 seater dining set	56,989	12 months	image/dining table.jpeg	not purchased
7	Double Bed	King-size double bed	47,989	12 months	image/double-bed.jpeg	not purchased
8	Double Bed	King-size double bed	47,989	12 months	image/double-bed.jpeg	not purchased
9	Double Bed	King-size double bed	47,989	12 months	image/double-bed.jpeg	not purchased
10	Sofa Set	5 seater sofa set	61,787	6 months	image/sofa.jpeg	not purchased
11	Dining Table with Chairs	6 seater dining set	56,989	12 months	image/dining table.jpeg	not purchased
12	Computer Table	Computer table with drawers	22,549	6 months	image/computer.jpeg	not purchased
13	Dining Table with Chairs	6 seater dining set	56,989	12 months	image/dining table.jpeg	not purchased
14	Computer Table	Computer table with drawers	22,549	6 months	image/computer.jpeg	not purchased
15	Double Bed	King-size double bed	47,989	12 months	image/double-bed.jpeg	not purchased
16	Sofa Set	5 seater sofa set	61,787	6 months	image/sofa.jpeg	not purchased

Furnitures Images:



Dining Table With Chairs



Double Bed



Sofa Set



Computer Table

IV) Project Team Members

- 1) Akash V
- 2) Sindhu N
- 3) Yuvashree B

V) Referenced Documents:

- 1) Appendix-A: 02-Install-and-Setup-Metmask-Ganache-Nodejs- Truffle-VisualStudioCode-in-Windows-Platform-03-Sep-2022.docx
- 2) Appendix-B: 03-Ethereum-Blockchain-Project-Setup-from-Scratch-03-Sep-2022.docx
- 3) Appendix-C: 04-Programs-and-Files-Used-in-Furnitures-Purchase-Shop-Application-03-Sep-2022.doc

VI) Project/ Solution (Furnitures Purchase Shop) Design



High Level:

- 1)** Create / provide the following in the Windows System:
- a)** Create and set the Ethereum Blockchain environment in the Widows system
 - b)** Create the Project folders and files using “Truffle” in the Windows System
 - c)** Write the Solidity program furnitures purchase.sol” capturing themain logic of the solution
 - d)** Write the required frontend, middleware and other required files forthe solution
 - e)** Provide the Solution data using .JSON file
 - f)** Place the required Furniture’s image files in the appropriate Folder

Details:

- a)** Set-up the Ethereum Blockchain environment in the Windows System by installing NodeJS, NPM, Truffle, Ganache and Metamask

(For the above given Step (a), please refer the Documentat
“Appendix-A” to this report)

- b)** By using Truffle, setup the project folder and required files in the Windows System.

(For the above given Step (b), please refer the Documentat
“Appendix-B” to this report)

- c)** Write a Solidity language program namely “furnitures purchase.sol” in whichwe will implement the main logic of the Solution.

- d)** Write the middleware program using JavaScript and Web3.js

- e)** Start the Ethereum Test Blockchain “Ganache” and sign-in to the Metamask.
Connect the metamask with two accounts of the Ganache Test Blockchain

- f)** We will also create a frontend (HTML and CSS based) for the solution so thatyou can interact with the Blockchain application through your browser.

(For the list along with content of programs used in the project ,
please refer the Document at “Appendix-C” to this report)

VII) Tools/ Technologies Used

Operating System

O/S: Windows 10

Front-end Tools:

- a) HTML, CSS
- b) Development Server (lite-server)
- c) Browser: Chrome Browser
- d) Nodejs and NPM
- e) Truffle

Backend:

- a) Ethereum based Test Blockchain linked with Metamask

Middleware:

- b) JavaScript with Web3.js

VIII) Project Team Members

- 1) Akash v
- 2) Sindhu N
- 3) Yuvashree B

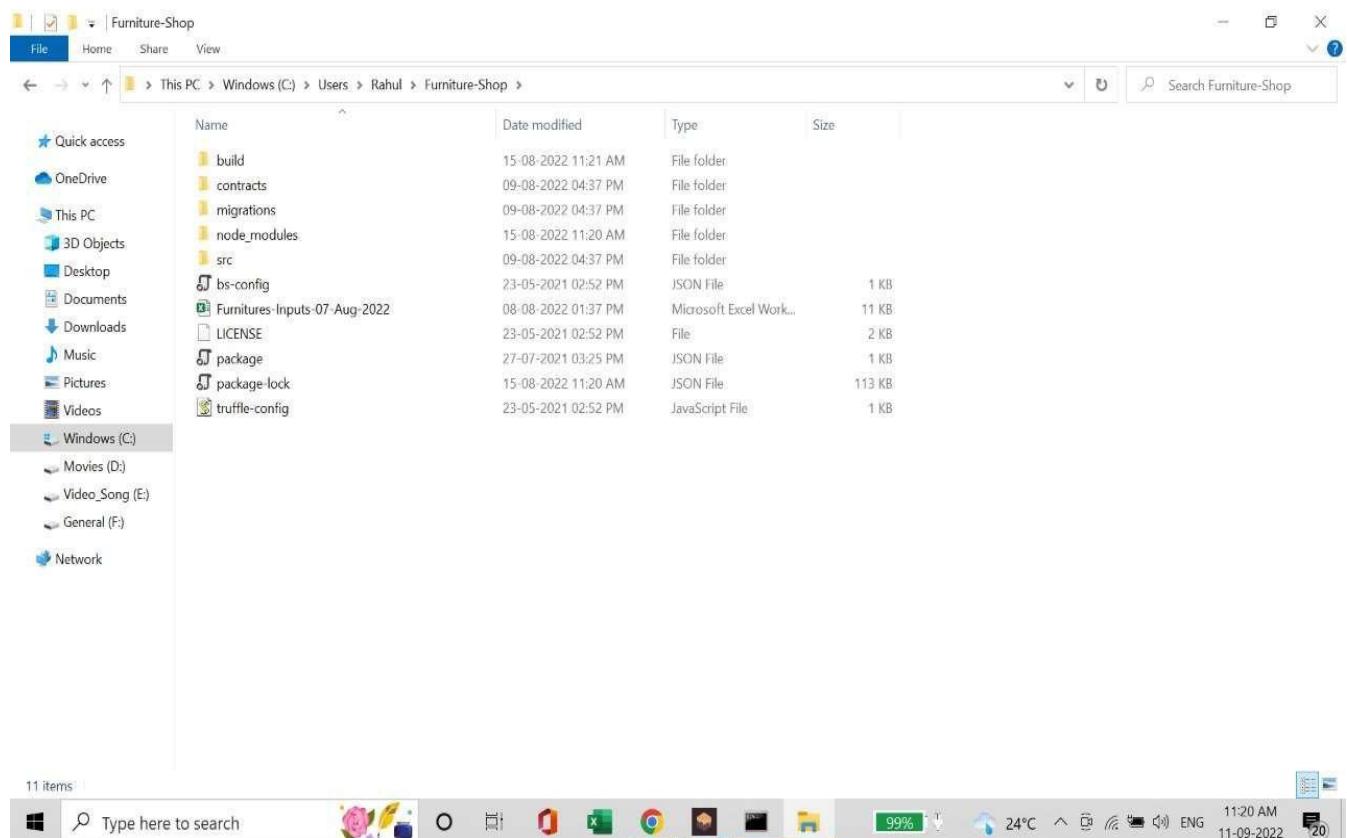
IX) Referenced Documents:

- 1) Appendix-A: 02-AWS-Free-Account-and-Instance-Creation-Steps-26-Aug-2022.docx
- 2) Appendix-B: 03-Setup-Hyperledger-Fabric-based-Blockchain-Network-and-Setup-Environment-for-CBFTW-Project-26-Aug-2022.docx
- 3) Appendix-C: 04-List-of-Programs-and-Files-Used-in-CBFTW-Project-26-Aug-2022.docx

X) Set-up, Compile and deployment of the Project “Furnitures Purchase Shop” on to Test Ethereum Blockchain“Ganache” using Metamask

1) Setup the Project Folder

- Copy the given Project folder under “c:\users\Furniture-Shop”directory and confirm

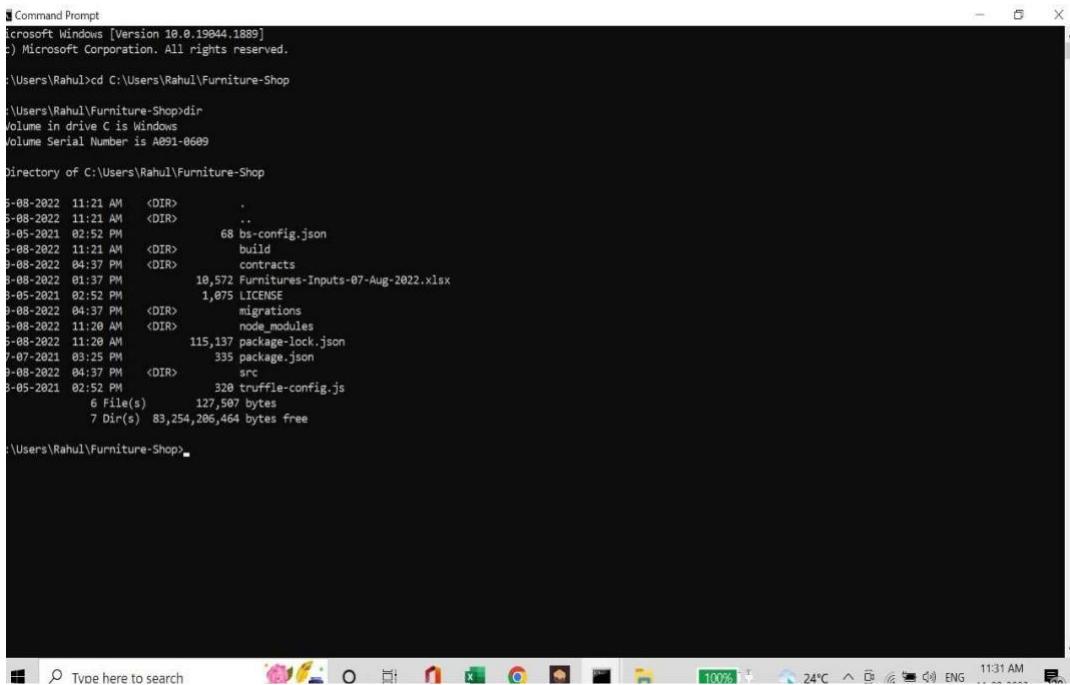


- Open the Windows Terminal and change over to the Project Folder, list the directory and confirm the availability of Project Files

cd C:\Users\Rahul\Furnitures-Purchase-Shop

```
C:\Users\Rahul>cd C:\Users\Rahul\Furniture-Shop
C:\Users\Rahul\Furniture-Shop>
```

dir



```
C:\ Command Prompt
Microsoft Windows [Version 10.0.19044.1889]
© Microsoft Corporation. All rights reserved.

:C:\Users\Rahul>cd C:\Users\Rahul\Furniture-Shop

:C:\Users\Rahul\Furniture-Shop>dir
Volume in drive C is Windows
Volume Serial Number is A091-0609

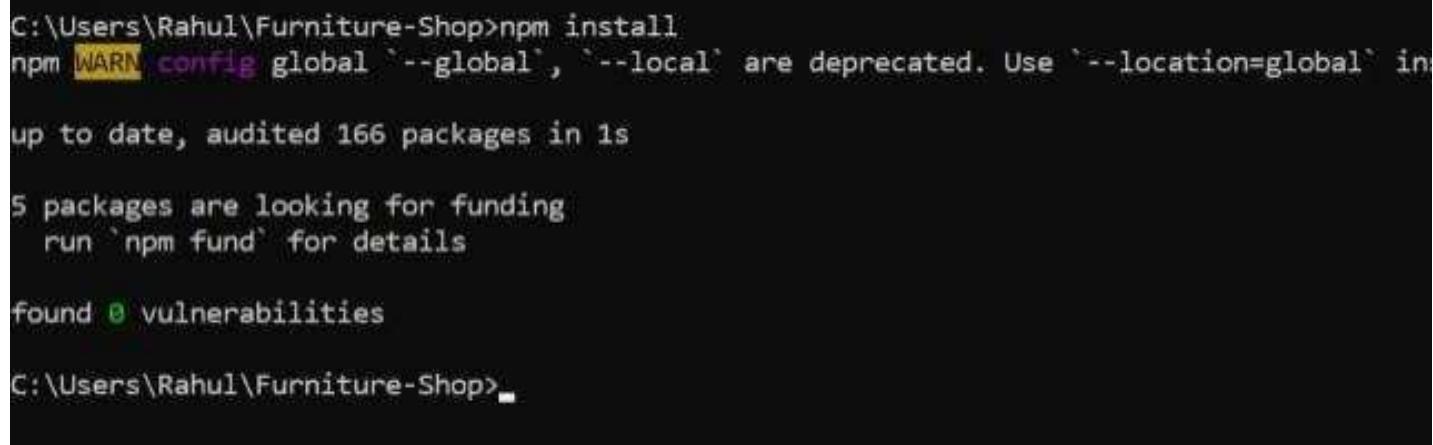
Directory of C:\Users\Rahul\Furniture-Shop

5-08-2022 11:21 AM <DIR> .
5-08-2022 11:21 AM <DIR> ..
1-05-2021 02:52 PM 68 bs-config.json
5-08-2022 11:21 AM <DIR> build
3-08-2022 04:37 PM <DIR> contracts
3-08-2022 01:37 PM 10,572 Furnitures-Inputs-07-Aug-2022.xlsx
3-05-2021 02:52 PM 1,075 LICENSE
3-08-2022 04:37 PM <DIR> migrations
3-08-2022 11:20 AM <DIR> node_modules
5-08-2022 11:20 AM 115,137 package-lock.json
7-07-2021 03:25 PM 335 package.json
3-08-2022 04:37 PM <DIR> src
3-05-2021 02:52 PM 320 truffle-config.js
   6 File(s)      127,507 bytes
    7 Dir(s)  83,254,286,464 bytes free

:C:\Users\Rahul\Furniture-Shop>
```

c) Execute the command “npm Install” and verify the availability of “node_modules” directory

npm install



```
C:\Users\Rahul\Furniture-Shop>npm install
npm WARN config global `--global`, `--local` are deprecated. Use `--location=global` instead.

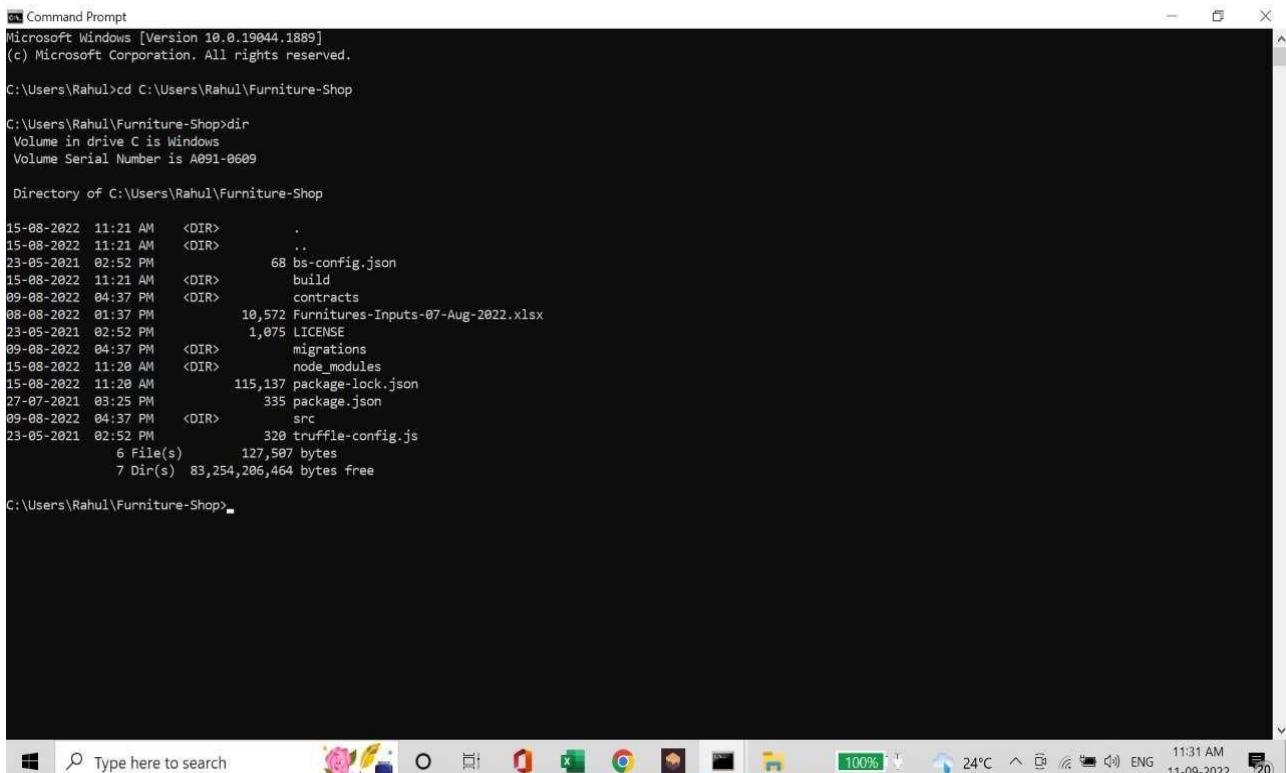
up to date, audited 166 packages in 1s

5 packages are looking for funding
  run 'npm fund' for details

found 0 vulnerabilities

C:\Users\Rahul\Furniture-Shop>
```

Dir



```
Command Prompt
Microsoft Windows [Version 10.0.19044.1889]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Rahul>cd C:\Users\Rahul\Furniture-Shop

C:\Users\Rahul\Furniture-Shop>dir
Volume in drive C is Windows
Volume Serial Number is A091-0609

Directory of C:\Users\Rahul\Furniture-Shop

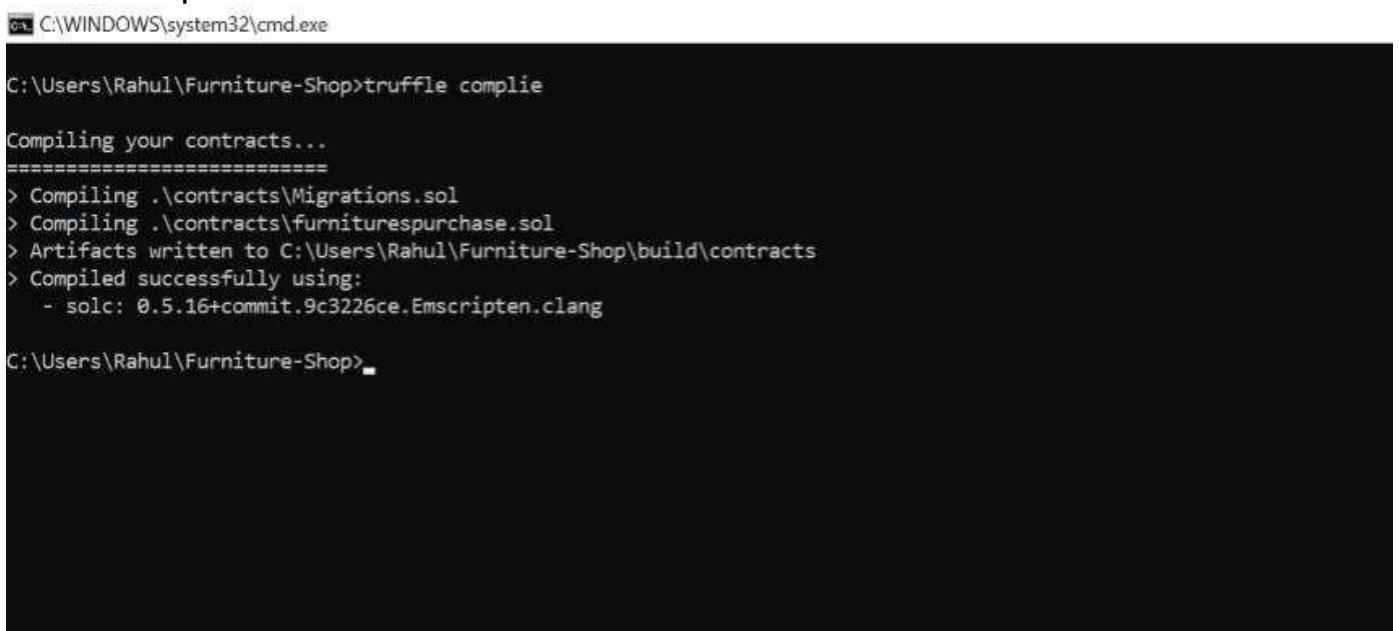
15-08-2022 11:21 AM    <DIR>        .
15-08-2022 11:21 AM    <DIR>        ..
23-05-2021 02:52 PM      68 bs-config.json
15-08-2022 11:21 AM    <DIR>        build
09-08-2022 04:37 PM    <DIR>        contracts
08-08-2022 01:37 PM      10,572 Furnitures-Inputs-07-Aug-2022.xlsx
23-05-2021 02:52 PM      1,075 LICENSE
09-08-2022 04:37 PM    <DIR>        migrations
15-08-2022 11:20 AM    <DIR>        node_modules
15-08-2022 11:20 AM      115,137 package-lock.json
27-07-2021 03:25 PM      335 package.json
09-08-2022 04:37 PM    <DIR>        src
23-05-2021 02:52 PM      320 truffle-config.js
               6 File(s)     127,507 bytes
               7 Dir(s)   83,254,206,464 bytes free

C:\Users\Rahul\Furniture-Shop>
```

2) Compile and deploy the “Furnitures Purchase Shop” Project

a) Compile the contract files and verify the creation of “build” directory

truffle compile



```
C:\WINDOWS\system32\cmd.exe

C:\Users\Rahul\Furniture-Shop>truffle compile

Compiling your contracts...
=====
> Compiling ./contracts\Migrations.sol
> Compiling ./contracts\furniturespurchase.sol
> Artifacts written to C:\Users\Rahul\Furniture-Shop\build\contracts
> Compiled successfully using:
  - solc: 0.5.16+commit.9c3226ce.Emscripten.clang

C:\Users\Rahul\Furniture-Shop>
```

dir

```
0% Command Prompt
Microsoft Windows [Version 10.0.19044.1889]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Rahul>cd C:\Users\Rahul\Furniture-Shop

C:\Users\Rahul\Furniture-Shop>dir
 Volume in drive C is Windows
 Volume Serial Number is A091-0609

Directory of C:\Users\Rahul\Furniture-Shop

15-08-2022  11:21 AM    <DIR>          .
15-08-2022  11:21 AM    <DIR>          ..
23-05-2021  02:52 PM           68 bs-config.json
15-08-2022  11:21 AM    <DIR>          build
09-08-2022  04:37 PM    <DIR>          contracts
08-08-2022  01:37 PM           10,572 Furnitures-Inputs-07-Aug-2022.xlsx
23-05-2021  02:52 PM           1,075 LICENSE
09-08-2022  04:37 PM    <DIR>          migrations
15-08-2022  11:20 AM    <DIR>          node_modules
15-08-2022  11:20 AM           115,137 package-lock.json
27-07-2021  03:25 PM           335 package.json
09-08-2022  04:37 PM    <DIR>          src
23-05-2021  02:52 PM           320 truffle-config.js
               6 File(s)      127,507 bytes
               7 Dir(s)   83,254,206,464 bytes free

C:\Users\Rahul\Furniture-Shop>
```



cd build/contracts
dir

```
C:\WINDOWS\system32\cmd.exe
C:\Users\Rahul\Furniture-Shop>cd build/contracts
C:\Users\Rahul\Furniture-Shop\build\contracts>dir
 Volume in drive C is Windows
 Volume Serial Number is A091-0609

Directory of C:\Users\Rahul\Furniture-Shop\build\contracts

15-08-2022 11:21 AM    <DIR> .
15-08-2022 11:21 AM    <DIR> ..
11-09-2022 11:44 AM           54,731 furniturespurchase.json
11-09-2022 11:44 AM           35,714 Migrations.json
                           2 File(s)      90,445 bytes
                           2 Dir(s)   83,259,854,848 bytes free

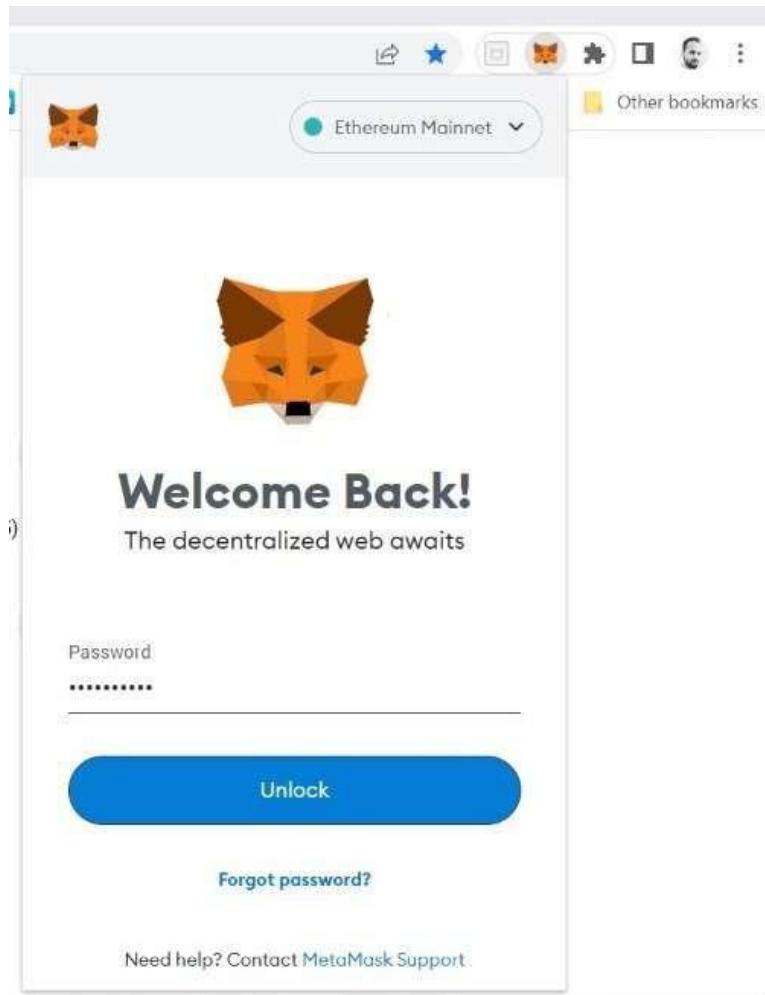
C:\Users\Rahul\Furniture-Shop\build\contracts>
```

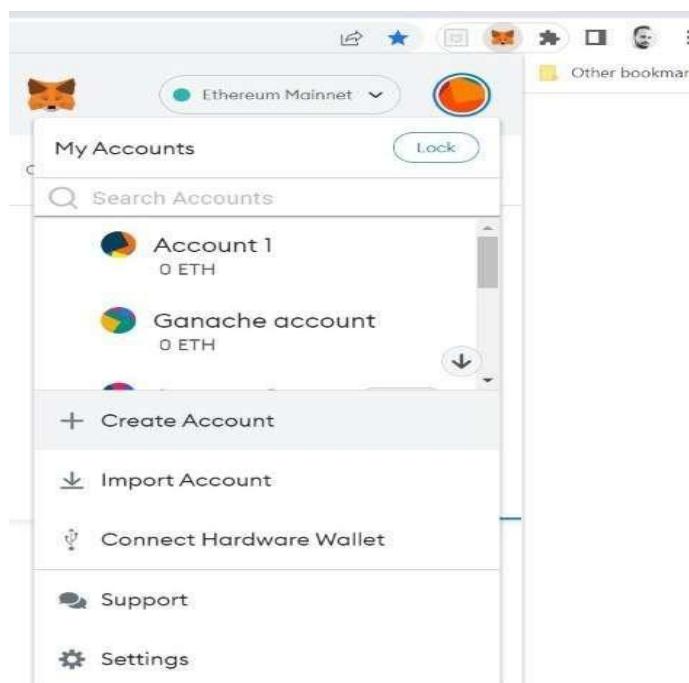
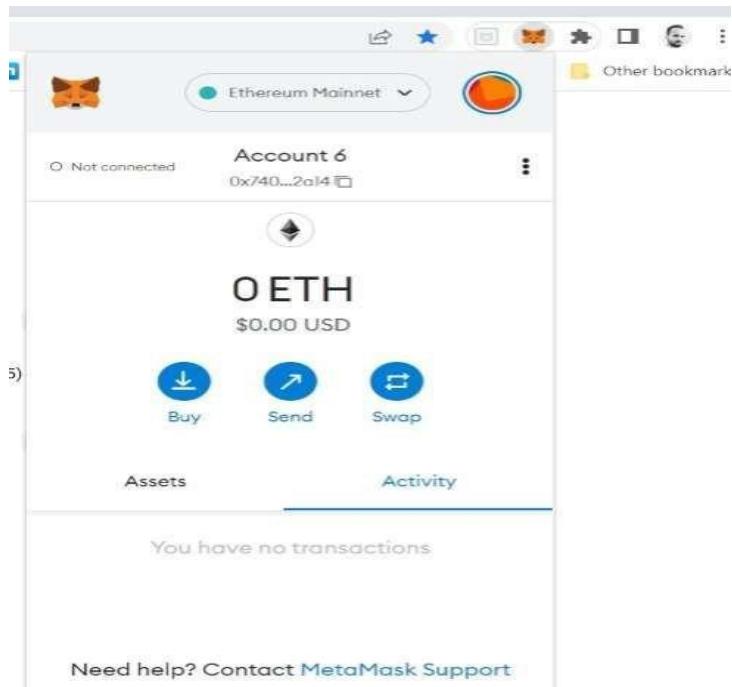
b) Start the Ganache Test Blockchain

The screenshot shows the Ganache interface with the following account details:

ADDRESS	BALANCE	TX COUNT	INDEX	
0x7a76AF4De8Ff039e853D056BcA223C971a9dbE7f	99.98 ETH	14	0	
0x54E5371D823D78be03cE36834246C6e75847E369	100.00 ETH	1	1	
0x740D995227b0A86F0Fbd0AA4eD75c46e40482a14	100.00 ETH	1	2	
0x59bc75d7d42263888FC9A9430Dc4BE8f48BA1Fa2	100.00 ETH	0	3	
0xadA957d5ACf75AedBC9E44Ad4aB0aa7DF042F8E7	100.00 ETH	0	4	
0xAC771D6D7Aa69540fd997bcE390F0B7Faa8b808a	100.00 ETH	0	5	

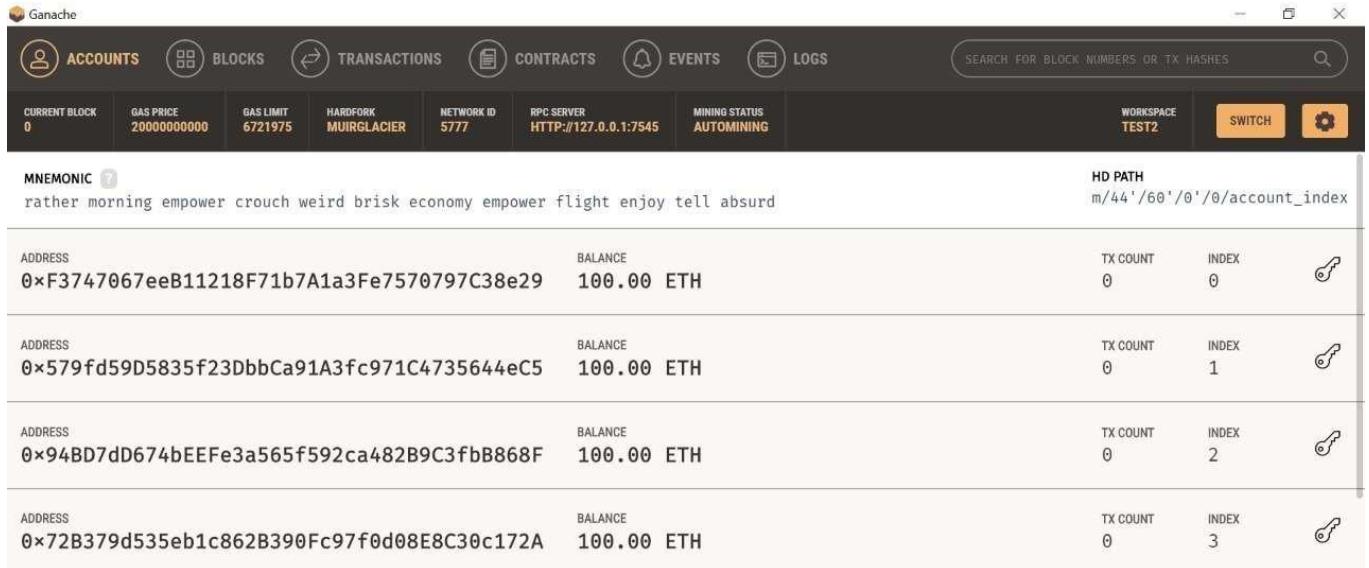
c) Start and unlock the Metamask Wallet. Select “Ganache Network”. Import the first account of Ganache Test Blockchain and confirm





Furnitures Purchase Shop Application

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Jayanagar

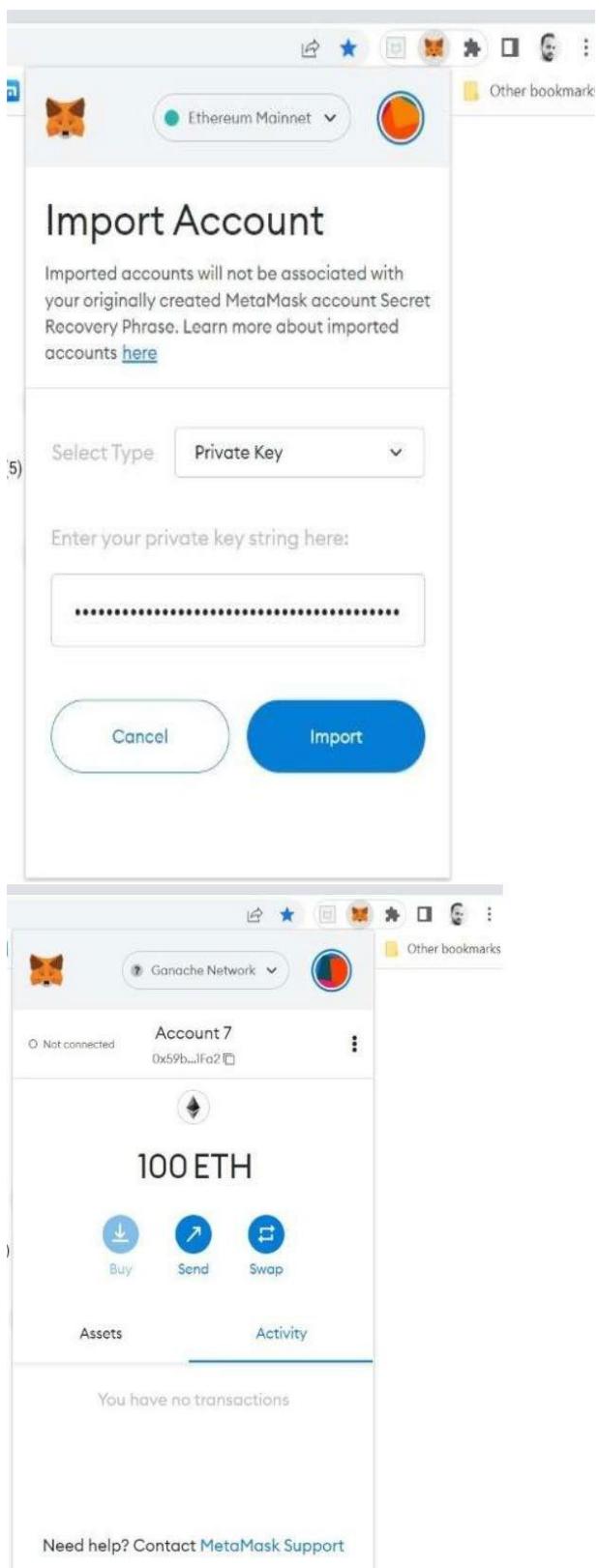


The screenshot shows the Ganache interface with the following configuration:

- ACCOUNTS**: CURRENT BLOCK 0, GAS PRICE 20000000000, GAS LIMIT 6721975, HARDFORK MUIRGLACIER, NETWORK ID 5777, RPC SERVER HTTP://127.0.0.1:7545, MINING STATUS AUTOMINING.
- LOGS**: WORKSPACE TEST2, SWITCH, GEAR icon.
- MNEMONIC**: rather morning empower crouch weird brisk economy empower flight enjoy tell absurd.
- HD PATH**: m/44'/60'/0'/0/account_index

ADDRESS	BALANCE	TX COUNT	INDEX	EDIT
0xF3747067eeB11218F71b7A1a3Fe7570797C38e29	100.00 ETH	0	0	🔗
0x579fd59D5835f23DbBcA91A3fc971C4735644eC5	100.00 ETH	0	1	🔗
0x94BD7dD674bEEFe3a565f592ca482B9C3fbB868F	100.00 ETH	0	2	🔗
0x72B379d535eb1c862B390Fc97f0d08E8C30c172A	100.00 ETH	0	3	🔗





d) Deploy the contracts on to Ganache Test Blockchain and verify

truffle migrate --reset

```
C:\Users\Rahul\Furniture-Shop>truffle migrate --reset

Compiling your contracts...
=====
> Compiling ./contracts\Migrations.sol
> Compiling ./contracts\furniturespurchase.sol
> Artifacts written to C:\Users\Rahul\Furniture-Shop\build\contracts
> Compiled successfully using:
  - solc: 0.5.16+commit.9c3226ce.Emscripten clang

Starting migrations...
=====
> Network name: 'development'
> Network id: 5777
> Block gas limit: 6721975 (0x6691b7)

1_initial_migration.js
=====

Replacing 'Migrations'
-----
> transaction hash: 0x045c423a3ecf9ca469927ad80c367db573e9224189b91305d3a2361581018fc7
> Blocks: 0
> contract address: 0xAdf5cC583e4D675c076e041F5fc68234767F9fa6
> block number: 17
> block timestamp: 1662908719
> account: 0x7a76AF4De8Ff039e853D056BcA223C971a9dbE7f
> balance: 99.97360642
> gas used: 164175 (0x2814f)
> gas price: 20 gwei
> value sent: 0 ETH
> total cost: 0.0032835 ETH

> Saving migration to chain.
```

C:\WINDOWS\system32\cmd.exe

```
> Saving migration to chain.
> Saving artifacts
-----
> Total cost: 0.0032835 ETH

2_deploy_contracts.js
=====

Replacing 'furniturespurchase'
-----
> transaction hash: 0x188e50e3215dc83e3187095f334f8203cee9a01c680a4157b21cc723cf0a763d
> Blocks: 0
> contract address: 0x5984F326Af9B962E0eB93ef165fb02bc72C46907
> block number: 19
> block timestamp: 1662908722
> account: 0x7a76AF4De8Ff039e853D056BcA223C971a9dbE7f
> balance: 99.96823856
> gas used: 226052 (0x37304)
> gas price: 20 gwei
> value sent: 0 ETH
> total cost: 0.00452104 ETH

> Saving migration to chain.
> Saving artifacts
-----
> Total cost: 0.00452104 ETH

Summary
=====
> Total deployments: 2
> Final cost: 0.00780454 ETH
```

C:\Users\Rahul\Furniture-Shop>

Furnitures Purchase Shop Application

MNEMONIC: rather morning empower crouch weird brisk economy empower flight enjoy tell absurd

ADDRESS	BALANCE	TX COUNT	INDEX
0xF3747067eeB11218F71b7A1a3Fe7570797C38e29	100.00 ETH	0	0
0x579fd59D5835f23DbbCa91A3fc971C4735644eC5	100.00 ETH	0	1
0x94BD7d674bEEFe3a565f592ca482B9C3fbB868F	100.00 ETH	0	2
0x72B379d535eb1c862B390Fc97f0d08E8C30c172A	100.00 ETH	0	3

TX HASH: 0xf0d849bf1bba87b32f7598ee4d57f9acec23e949e656aabbb81b39e7e9907d66 **CONTRACT CALL**

FROM ADDRESS	TO CONTRACT ADDRESS	GAS USED	VALUE
0x7a76AF4De8FF039e853D056BcA223C971a9dbE7f	0xAdf5c583e4D675c076e041F5fc68234767F9fa6	27341	0

TX HASH: 0x188e50e3215dc83e3187095f334f8203cee9a01c680a4157b21cc723cf0a763d **CONTRACT CREATION**

FROM ADDRESS	CREATED CONTRACT ADDRESS	GAS USED	VALUE
0x7a76AF4De8FF039e853D056BcA223C971a9dbE7f	0x59B4F326Af9B962E0eB93ef165fbD2bc72C469D7	226852	0

TX HASH: 0xbf011eea43439c15cb63b0d4a4f605783f8f62ee01a0923762447f94aba79958 **CONTRACT CALL**

FROM ADDRESS	TO CONTRACT ADDRESS	GAS USED	VALUE
0x7a76AF4De8FF039e853D056BcA223C971a9dbE7f	0xAdf5c583e4D675c076e041F5fc68234767F9fa6	42341	0

TX HASH: 0x045c423a3ecf9ca469927ad80c367db573e9224189b91305d3a2361581018fc7 **CONTRACT CREATION**

FROM ADDRESS	CREATED CONTRACT ADDRESS	GAS USED	VALUE
--------------	--------------------------	----------	-------

Account 7: 0x40...2a14

Assets

- (5) Purchase Sep 10 - localhost:3000 -0 ETH -0 ETH

Need help? Contact [MetaMask Support](#)

XI) Start the Dev Server and verify the deployment of the project's frontend on to the default browser of the Windows System

1) Start the Dev Server (lite-server)

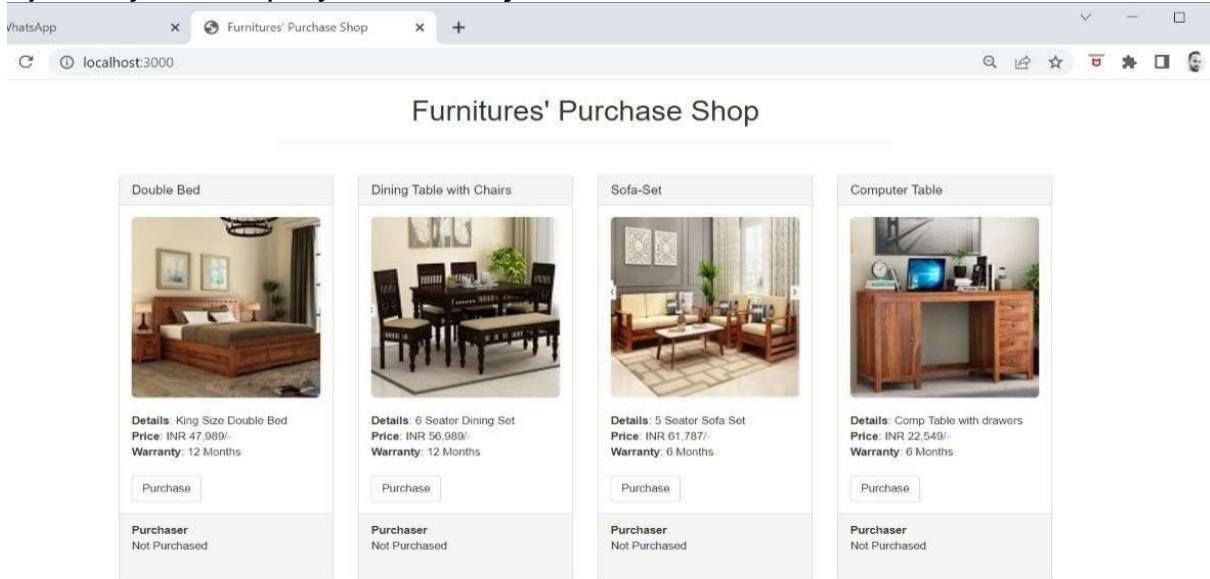
npm run dev

```
lite-server
C:\Users\Rahul\Furniture-Shop>npm run dev
npm [WARN] config global `--global`, `--local` are deprecated. Use `--location=global` instead.

> petspurchase@1.0.0 dev
> lite-server

** browser-sync config **
{
  injectChanges: false,
  files: [ './**/*.{html,htm,css,js}' ],
  watchOptions: { ignored: 'node_modules' },
  server: {
    baseDir: [ './src', './build/contracts' ],
    middleware: [ [Function (anonymous)], [Function (anonymous)] ]
  }
}
[Browsersync] Access URLs:
-----
  Local: http://localhost:3000
  External: http://192.168.47.165:3000
-----
  UI: http://localhost:3001
  UI External: http://localhost:3001
[Browsersync] Serving files from: ./src
[Browsersync] Serving files from: ./build/contracts
[Browsersync] Watching files...
22.09.11 20:52:43 304 GET /index.html
22.09.11 20:52:44 304 GET /css/bootstrap.min.css
22.09.11 20:52:44 304 GET /js/app.js
22.09.11 20:52:44 304 GET /js/bootstrap.min.js
22.09.11 20:52:44 304 GET /js/truffle-contract.js
22.09.11 20:52:44 304 GET /js/web3.min.js
22.09.11 20:52:45 304 GET /furnitures.json
22.09.11 20:52:46 304 GET /images/Sofa-Set-140.jpg
22.09.11 20:52:46 304 GET /images/Comp-Table-140.jpg
22.09.11 20:52:46 404 GET /favicon.ico
22.09.11 20:52:46 304 GET /images/Dining-Set-140.jpg
22.09.11 20:52:46 304 GET /images/Double-Bed-140.jpg
22.09.11 20:52:46 200 GET /furniturespurchase.json
```

2) Verify the display of the Project's frontend in the Chrome Browser



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sApp x Furnitures' Purchase Shop +/-

localhost:3000

Computer Table	Sofa Set	Dining Table with Chairs	Double Bed
			
Details: Comp Table with drawers Price: INR 22,549/- Warranty: 6 Months	Details: 5 Seater Sofa Set Price: INR 61,787/- Warranty: 6 Months	Details: 6 Seater Dining Set Price: INR 56,989/- Warranty: 12 Months	Details: King Size Double Bed Price: INR 47,989/- Warranty: 12 Months
Purchase	Purchase	Purchase	Purchase
Purchaser Not Purchased	Purchaser Not Purchased	Purchaser Not Purchased	Purchaser Not Purchased

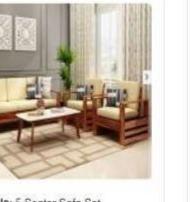
sApp x Furnitures' Purchase Shop +/-

localhost:3000

Computer Table	Sofa Set	Dining Table with Chairs	Double Bed
			
Details: Comp Table with drawers Price: INR 22,549/- Warranty: 6 Months	Details: 5 Seater Sofa Set Price: INR 61,787/- Warranty: 6 Months	Details: 6 Seater Dining Set Price: INR 56,989/- Warranty: 12 Months	Details: King Size Double Bed Price: INR 47,989/- Warranty: 12 Months
Purchase	Purchase	Purchase	Purchase
Purchaser Purchased	Purchaser Purchased	Purchaser Purchased	Purchaser Purchased

(5) WhatsApp x Furnitures' Purchase Shop +/-

localhost:3000

Computer Table	Sofa Set	Dining Table with Chairs	Double Bed
			
Details: Comp Table with drawers Price: INR 22,549/- Warranty: 6 Months	Details: 5 Seater Sofa Set Price: INR 61,787/- Warranty: 6 Months	Details: 6 Seater Dining Set Price: INR 56,989/- Warranty: 12 Months	Details: King Size Double Bed Price: INR 47,989/- Warranty: 12 Months
Purchase	Purchase	Purchase	Purchase
Purchaser Not Purchased	Purchaser Not Purchased	Purchaser Not Purchased	Purchaser Not Purchased

List of Purchasers

Furniture ID: 0
Purchaser:

Furniture ID: 1
Purchaser:

Furniture ID: 2
Purchaser:

Furniture ID: 3
Purchaser:

Furniture ID: 4
Purchaser:

Furniture ID: 5
Purchaser:

Furniture ID: 6
Purchaser:

Furniture ID: 7
Purchaser:

Furniture ID: 8
Purchaser:

Furniture ID: 9
Purchaser:

Furniture ID: 10
Purchaser:

Furniture ID: 11
Purchaser:

Furniture ID: 12
Purchaser:

Furniture ID: 13
Purchaser:

Furniture ID: 14
Purchaser:

Furniture ID: 15
Purchaser:

XII) Interactions with the “Furniture’s Purchase Shop” application using the frontend

1) Purchase a “Furniture” using the currently connected Ethereum Account

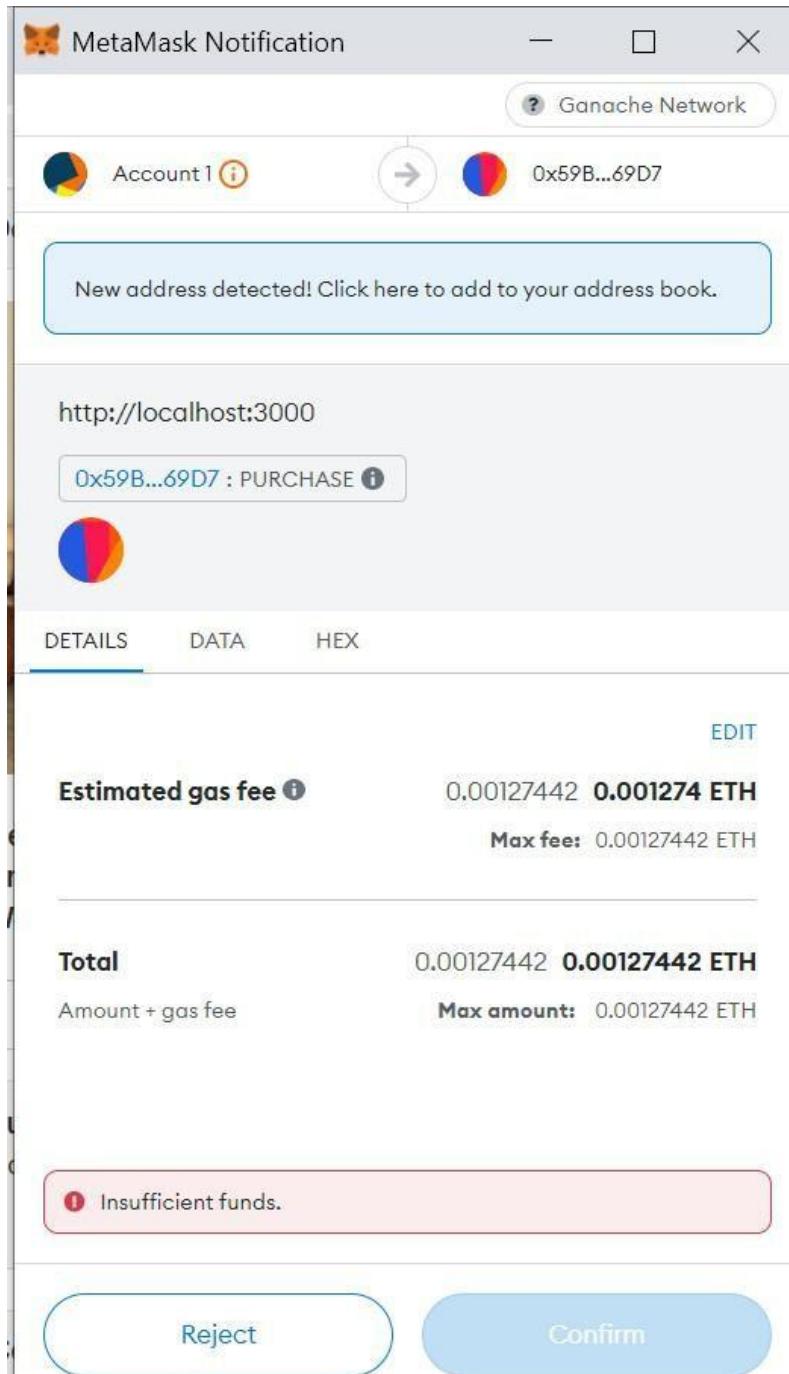
- a) Click on “Purchase” button given under any one of the Furniture pictures

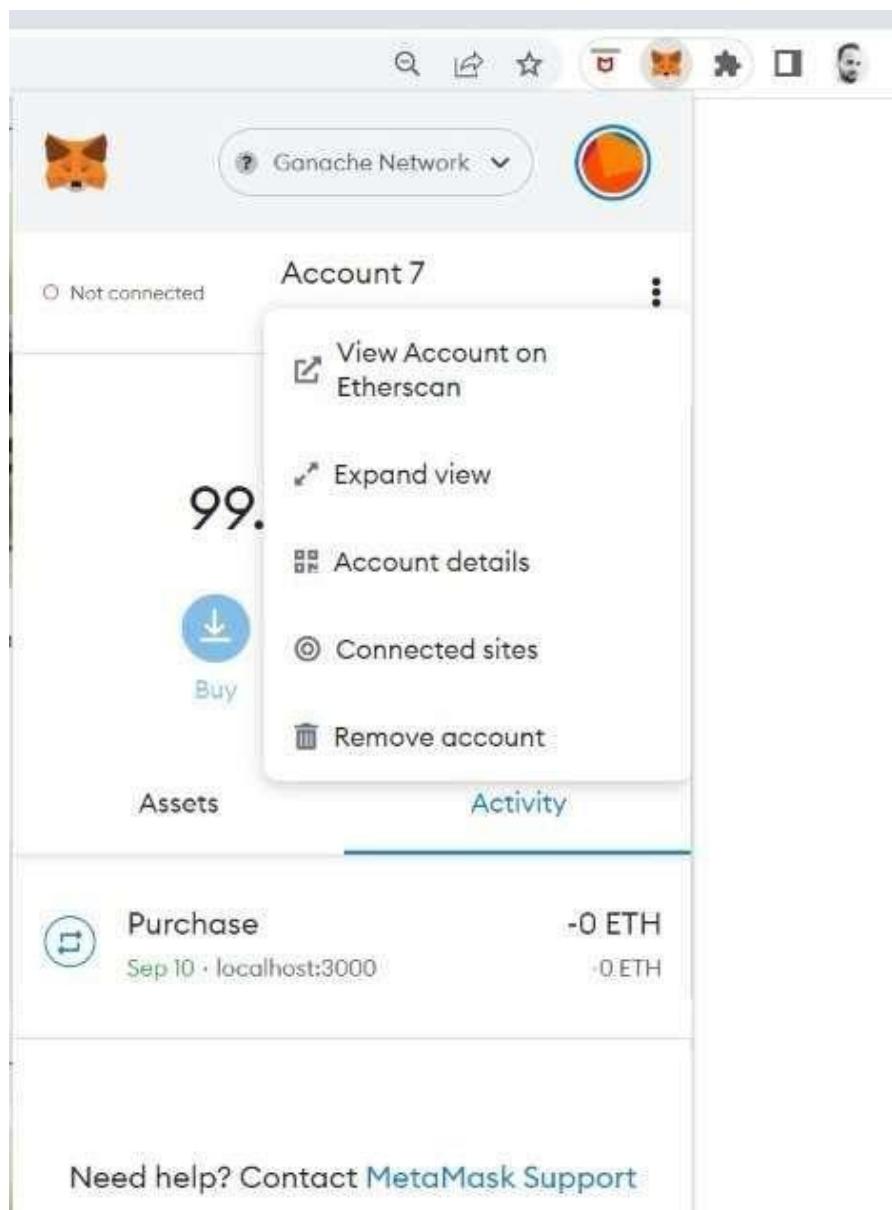
The screenshot shows a web browser window titled 'Furnitures' Purchase Shop'. The page displays four furniture items in a grid:

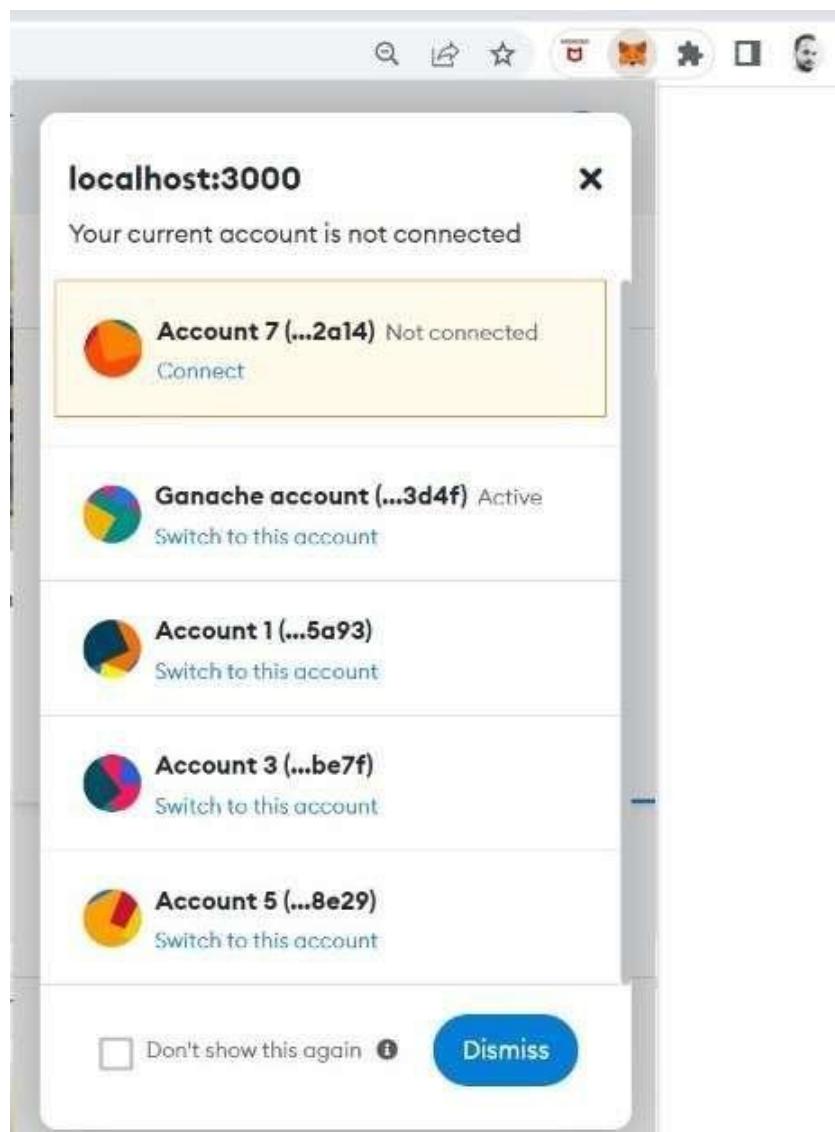
- Double Bed:** An image of a wooden double bed. Below it, the text reads: "Details: King Size Double Bed", "Price: INR 47,989/-", "Warranty: 12 Months". A "Purchase" button is present. The status message below is: "Purchaser: Not Purchased".
- Dining Table with Chairs:** An image of a dining set. Below it, the text reads: "Details: 6 Seater Dining Set", "Price: INR 56,989/-", "Warranty: 12 Months". A "Purchase" button is present. The status message below is: "Purchaser: Not Purchased".
- Sofa-Set:** An image of a sofa set. Below it, the text reads: "Details: 5 Seater Sofa Set", "Price: INR 61,787/-", "Warranty: 6 Months". A "Purchase" button is present. The status message below is: "Purchaser: Not Purchased".
- Computer Table:** An image of a wooden computer desk. Below it, the text reads: "Details: Comp Table with drawers", "Price: INR 22,549/-", "Warranty: 6 Months". A "Purchase" button is present. The status message below is: "Purchaser: Not Purchased".

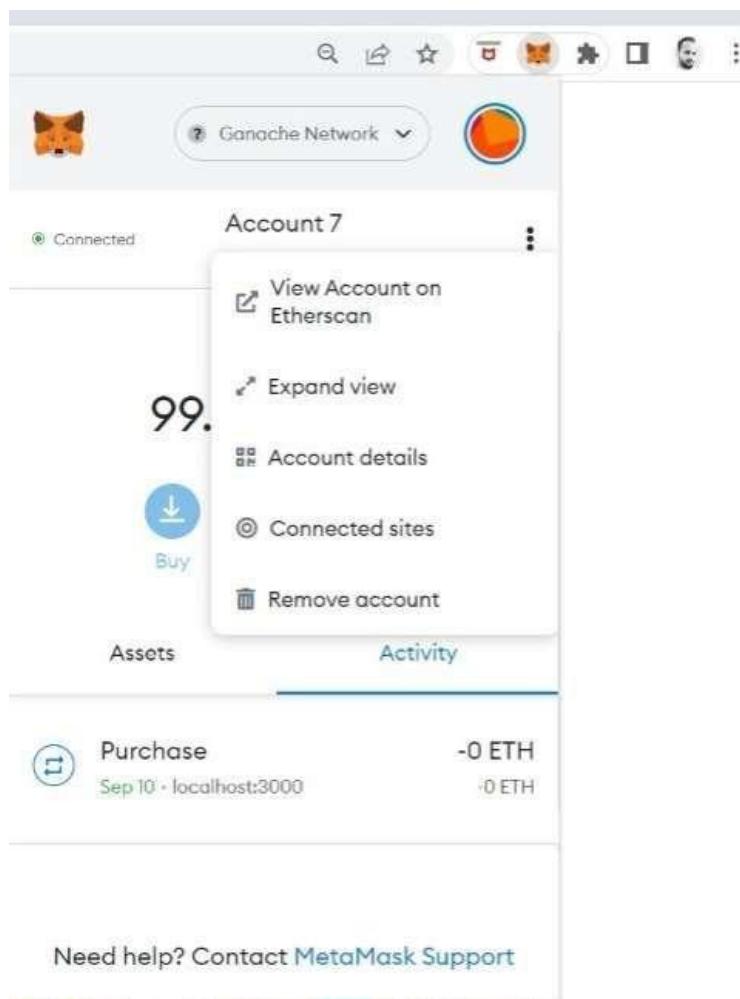
b) Check on the Metamask account displayed and make sure that your recently imported account is displayed and it is loaded with 100 Ethers

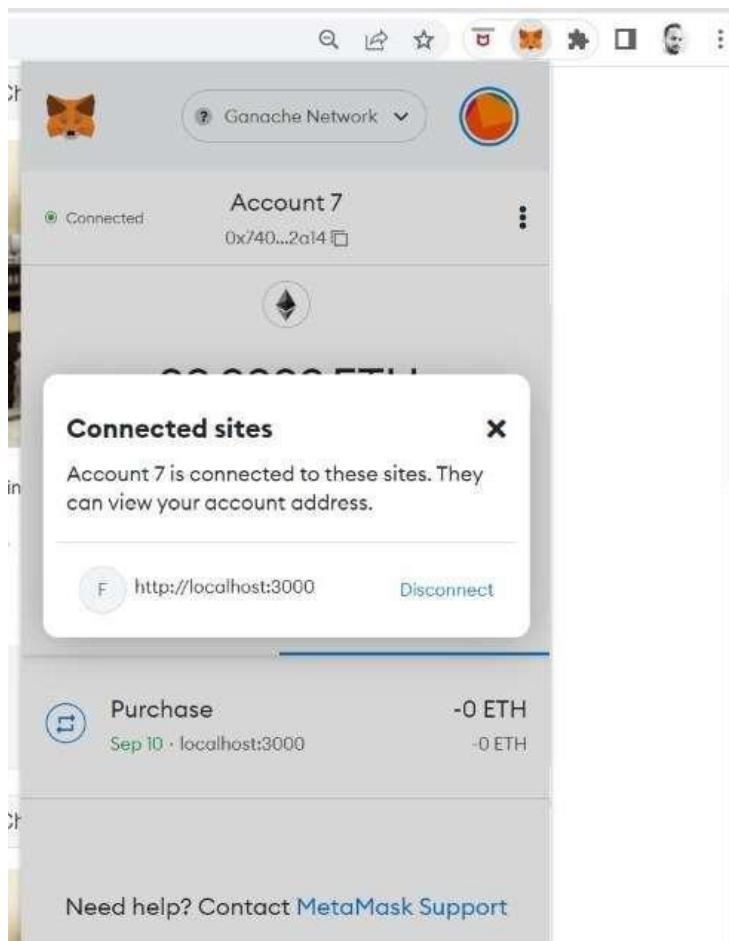
Note: If your recently imported account is not displayed means that account is not active with the Ganache Test Blockchain. Make sure that that account becomes active.











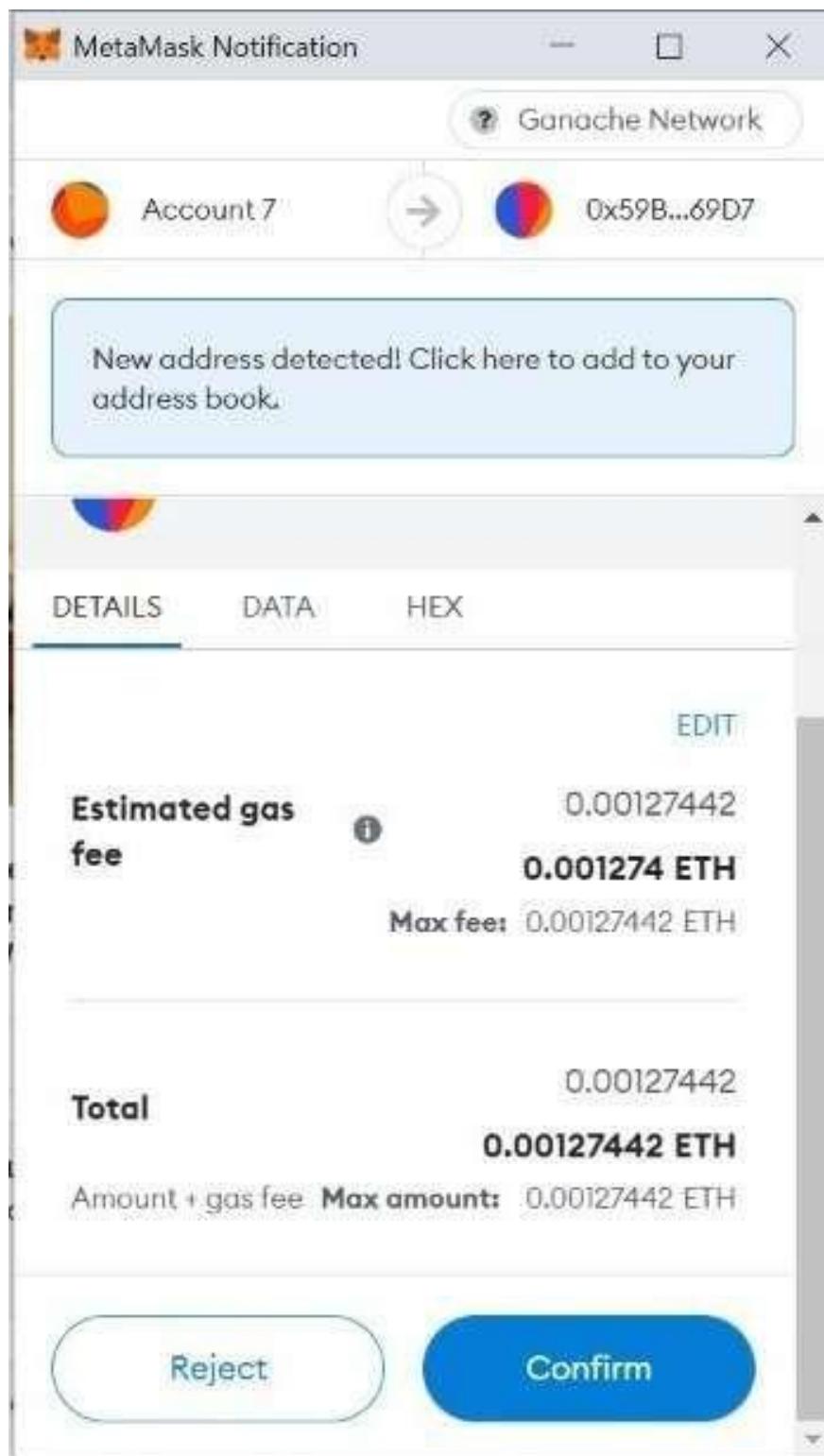
c) Now, click on “Purchase” button given under any one of the Furniture pictures

The screenshot shows the "Furnitures' Purchase Shop" application running in a browser. The page displays four furniture items in a grid:

- Double Bed:** King Size Double Bed, Price: INR 47,989/-, Warranty: 12 Months. Purchase button.
- Dining Table with Chairs:** 6 Seater Dining Set, Price: INR 56,989/-, Warranty: 12 Months. Purchase button.
- Sofa-Set:** 5 Seater Sofa Set, Price: INR 61,787/-, Warranty: 6 Months. Purchase button.
- Computer Table:** Comp Table with drawers, Price: INR 22,549/-, Warranty: 6 Months. Purchase button.

Under each item, it says "Purchaser Not Purchased".

- d) Verify the Metamask Wallet display (like Account Info, Estimated GasFee, Total Fees) and then click on “Confirm” button



e) Verify that the clicked “Purchase” button is changed to “Success”. The Ethereum Account info is displayed under Purchaser

This screenshot shows a web-based furniture purchase application running on a local host at port 3000. The interface includes a sidebar with navigation icons and a main content area displaying four furniture items: Computer Table, Sofa Set, Dining Table with Chair, and Double Bed. Each item has a thumbnail, details (e.g., price, warranty), and a 'Purchase' button.

To the right of the furniture items is a blockchain wallet interface connected to the Ganache Network. It displays the account balance as 99.9983 ETH and provides options to Buy, Send, or Swap tokens. Below the wallet interface is a transaction history section titled 'Activity'.

Date	Action	Value
Sep 11	Purchase	-0 ETH
Sep 10	Purchase	-0 ETH

This screenshot shows the same application after a purchase has been made. The 'Purchase' button for the Computer Table has been replaced by a 'Purchased' button. The Purchaser field now shows the Ethereum address 0x740d995227b0a86f0fb0aa4ed75c46e40482a14. The other furniture items and the blockchain wallet interface remain visible.

f) Verify that the Purchaser's Ethereum account info is captured in the “Listof Purchasers”

List of Purchasers

Furniture ID: 0 Purchaser:	Furniture ID: 1 Purchaser:
Furniture ID: 2 Purchaser:	Furniture ID: 3 Purchaser:
Furniture ID: 4 Purchaser:	Furniture ID: 5 Purchaser:
Furniture ID: 6 Purchaser: 0x740d995227b0a86f0fb0aa4ed75c46e40482a14	Furniture ID: 7 Purchaser:
Furniture ID: 8 Purchaser:	Furniture ID: 9 Purchaser:
Furniture ID: 10 Purchaser:	Furniture ID: 11 Purchaser:
Furniture ID: 12 Purchaser:	Furniture ID: 13 Purchaser:
Furniture ID: 14 Purchaser:	Furniture ID: 15 Purchaser:

g) Verify the Ganache TX COUNT, Transaction and New Block Creation

MNEMONIC	ADDRESS	BALANCE	TX COUNT	INDEX	OPTIONS
often occur mouse lunar focus pole marble employ steel fan beach detail	0x7a76AF4De8FF039e853D056BcA223C971a9dbE7f	99.97 ETH	18	0	🔗
	0x54E5371D823D78be03cE36834246C6e75847E369	100.00 ETH	1	1	🔗
	0x740d995227b0A86F0Fbd0AA4eD75c46e40482a14	100.00 ETH	3	2	🔗
	0x59bc75d7d42263888FC9A9430Dc4BE8f48BA1Fa2	100.00 ETH	0	3	🔗
	0xadA957d5ACf75AedBC9E44Ad4aB0aa7DF042F8E7	100.00 ETH	0	4	🔗

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The screenshot shows the Ganache interface with three transaction details and a block history table.

TX HASH: 0x816b6b1e9616eda54af025ff42f212d25721fa0ef14a82a7f23b599954e83545

FROM ADDRESS: 0x740D995227b0A86F0Fbd0AA4eD75c46e40482a14

TO CONTRACT ADDRESS: 0x59B4F326Af9B962E0eB93ef165fbD2bc72C469D7

GAS USED: 42481

VALUE: 0

TX HASH: 0xf0d849bf1bba87b32f7598ee4d57f9acec23e949e656aabbb81b39e7e9907d66

FROM ADDRESS: 0x7a76AF4De8FF039e853D056BcA223C971a9dbE7f

TO CONTRACT ADDRESS: 0xAdf5cC583e40675c876e841F5fc68234767F9fa6

GAS USED: 27341

VALUE: 0

TX HASH: 0x188e50e3215dc83e3187095f334f8203cee9a01c680a4157b21cc723cf0a763d

FROM ADDRESS: 0x7a76AF4De8FF039e853D056BcA223C971a9dbE7f

CREATED CONTRACT ADDRESS: 0x59B4F326Af9B962E0eB93ef165fbD2bc72C469D7

GAS USED: 226052

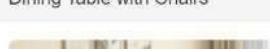
VALUE: 0

CURRENT BLOCK	GAS PRICE	GAS LIMIT	HARDFORK	NETWORK ID	RPC SERVER	MINING STATUS	WORKSPACE	SWITCH	
21	2000000000	6721975	MUIRGLEACIER	5777	HTTP://127.0.0.1:7545	AUTOMINING	TESTING		
BLOCK 22	MINED ON 2022-09-11 21:47:28					GAS USED 42481			
BLOCK 21	MINED ON 2022-09-11 21:24:50					GAS USED 42481			
BLOCK 20	MINED ON 2022-09-11 20:35:23					GAS USED 27341			
BLOCK 19	MINED ON 2022-09-11 20:35:22					GAS USED 226052			
BLOCK 18	MINED ON 2022-09-11 20:35:21					GAS USED 42341			
BLOCK 17	MINED ON 2022-09-11 20:35:19					GAS USED 164175			
BLOCK 16	MINED ON 2022-09-10 15:26:04					GAS USED 42481			

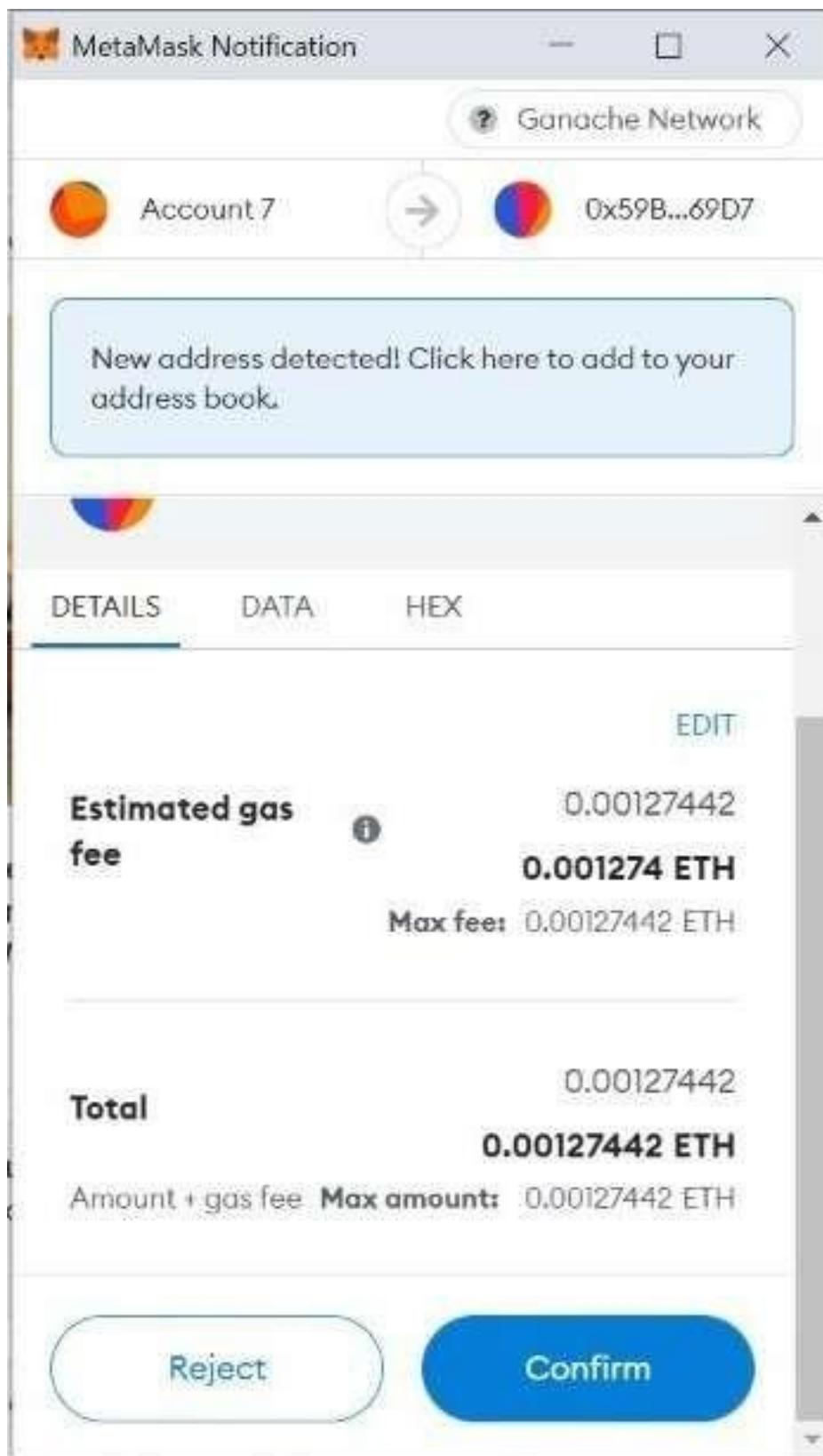
2) Purchase a second “Furniture” with the same Ethereum Account

- a) Click on “Purchase” button below any of the Furniture pictures which hasnot been purchased so far

Note-1: You cannot purchase a Furniture which has already been purchased Note-2: With the same Ethereum account you can purchase more than one Furniture

<p>Computer Table</p>  <p>Details: Comp Table with drawers Price: INR 22,549/- Warranty: 6 Months</p> <p>Purchase</p> <p>Purchaser Not Purchased</p>	<p>Sofa Set</p>  <p>Details: 5 Seater Sofa Set Price: INR 61,787/- Warranty: 6 Months</p> <p>Purchase</p> <p>Purchaser Not Purchased</p>	<p>Dining Table with Chairs</p>  <p>Details: 6 Seater Dining Set Price: INR 56,989/- Warranty: 12 Months</p> <p>Purchased</p> <p>Purchaser 0x740d995227b0a86f0fb0aa4ed75c46e40482a14</p>	<p>Double Bed</p>  <p>Details: King Size Double Bed Price: INR 47,989/- Warranty: 12 Months</p> <p>Purchase</p> <p>Purchaser Not Purchased</p>
<p>Double Bed</p>  <p>Purchaser Not Purchased</p>	<p>Sofa Set</p>  <p>Purchaser Not Purchased</p>	<p>Dining Table with Chairs</p>  <p>Purchaser Not Purchased</p>	<p>Computer Table</p>  <p>Purchaser Not Purchased</p>

- b) Verify the Metamask Wallet display (like Account Info, Estimated GasFee, Total Fees) and then click on “Confirm” button



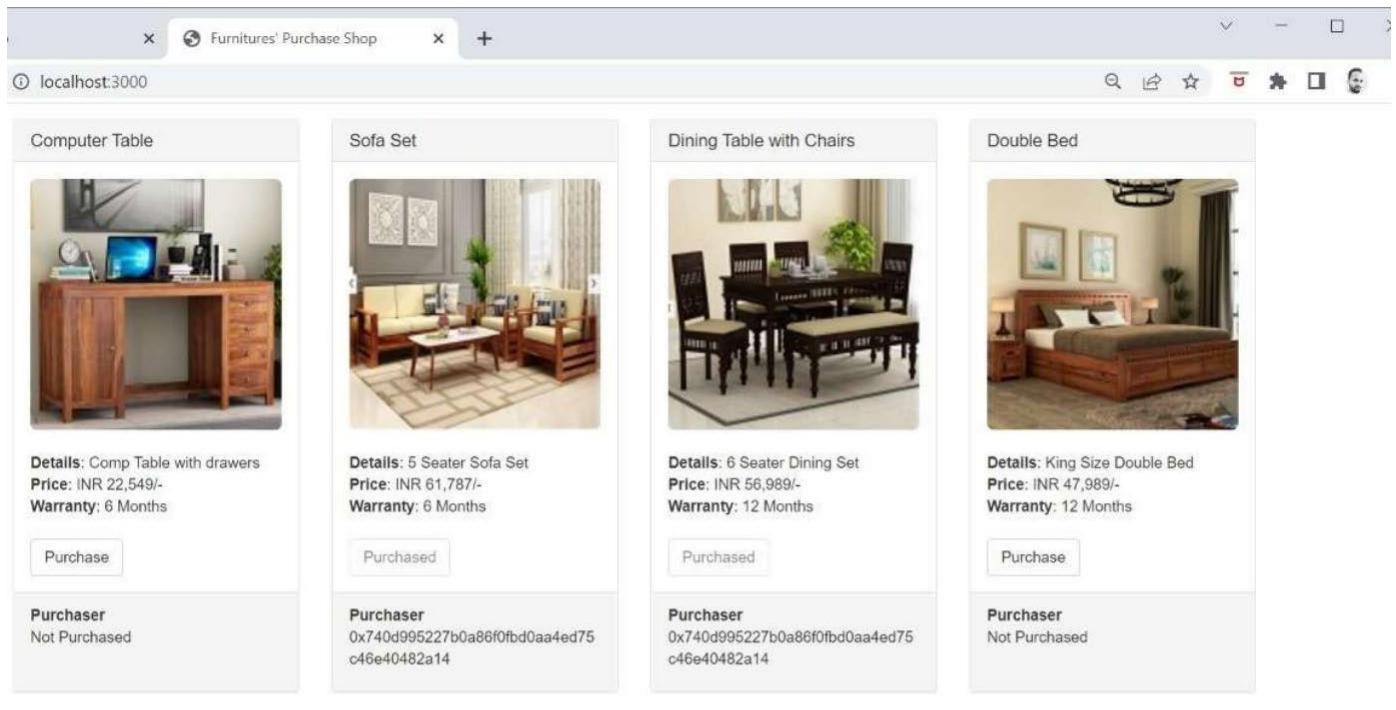
c) Verify that the “Purchase” button has changed into “Success” and the “Purchaser” Account address is getting displayed below the picture of purchased Furniture. Also, verify that the Purchaser’s Ethereum account infois captured in the “List of Purchasers”

Item	Image	Details	Status	Purchaser Address
Computer Table		Details: Comp Table with drawers Price: INR 22,549/- Warranty: 6 Months	Purchase	
Sofa Set		Details: 5 Seater Sofa Set Price: INR 61,787/- Warranty: 6 Months	Purchased	0x740d995227b0a86f0fb0aa4ed75 c46e40482a14
Dining Table with Chairs		Details: 6 Seater Dining Table with Chairs Price: INR 56,989/- Warranty: 12 Months	Purchased	0x740d995227b0a86f0fb0aa4ed75 c46e40482a14
Double Bed		Details: King Size Double Bed Price: INR 47,989/- Warranty: 12 Months	Purchase	

Activity

- Purchase Sep 11 - localhost:3000 -0 ETH 0 ETH
- Purchase Sep 11 - localhost:3000 -0 ETH 0 ETH

Item	Image	Details	Status	Purchaser Address
Computer Table		Details: Comp Table with drawers Price: INR 22,549/- Warranty: 6 Months	Purchase	
Sofa Set		Details: 5 Seater Sofa Set Price: INR 61,787/- Warranty: 6 Months	Purchased	0x740d995227b0a86f0fb0aa4ed75 c46e40482a14
Dining Table with Chairs		Details: 6 Seater Dining Table with Chairs Price: INR 56,989/- Warranty: 12 Months	Purchased	0x740d995227b0a86f0fb0aa4ed75 c46e40482a14
Double Bed		Details: King Size Double Bed Price: INR 47,989/- Warranty: 12 Months	Purchase	



List of Purchasers

Furniture ID: 0
Purchaser:

Furniture ID: 2
Purchaser:

Furniture ID: 4
Purchaser:

Furniture ID: 6
Purchaser: 0x740d995227b0a86f0fb0aa4ed75c46e40482a14

Furniture ID: 8
Purchaser:

Furniture ID: 10
Purchaser:

Furniture ID: 12
Purchaser:

Furniture ID: 14
Purchaser:

Furniture ID: 1
Purchaser:

Furniture ID: 3
Purchaser:

Furniture ID: 5
Purchaser: 0x740d995227b0a86f0fb0aa4ed75c46e40482a14

Furniture ID: 7
Purchaser:

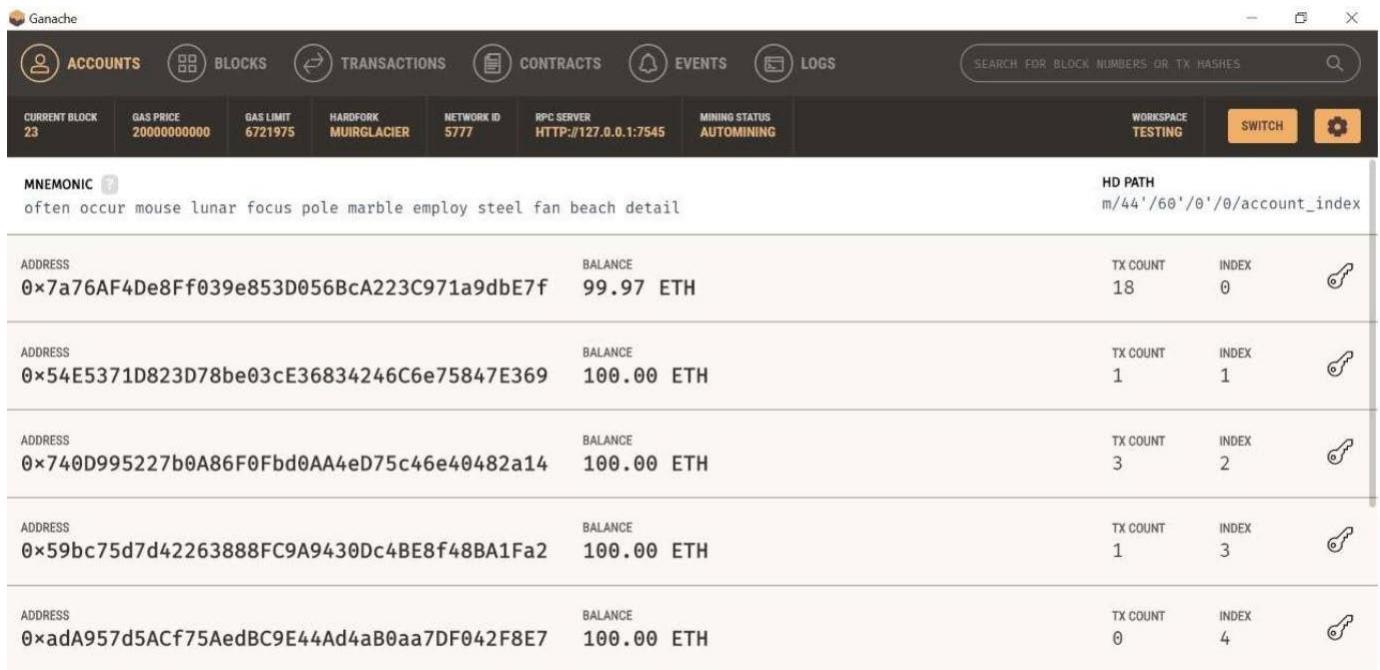
Furniture ID: 9
Purchaser:

Furniture ID: 11
Purchaser:

Furniture ID: 13
Purchaser:

Furniture ID: 15
Purchaser:

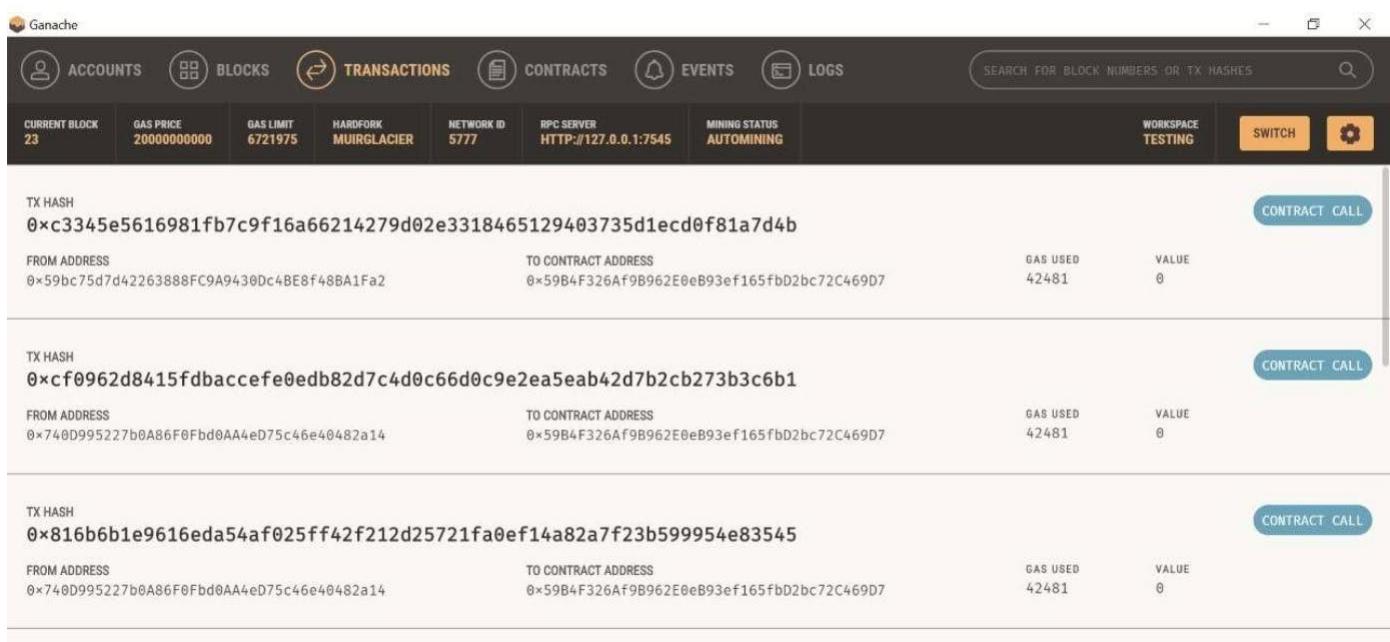
d) Verify the Ganache TX COUNT, Transaction and New Block Creation



This screenshot shows the Ganache interface with the following details:

- Accounts:** CURRENT BLOCK 23, GAS PRICE 2000000000, GAS LIMIT 6721975, HARDFORK MUIRGLACIER, NETWORK ID 5777, RPC SERVER HTTP://127.0.0.1:7545, MINING STATUS AUTOMINING.
- Logs:** WORKSPACE TESTING.
- MNEMONIC:** often occur mouse lunar focus pole marble employ steel fan beach detail.
- HD PATH:** m/44'/60'/0'/0/account_index.
- Account Balances:**

ADDRESS	BALANCE	TX COUNT	INDEX	Action
0x7a76AF4De8Ff039e853D056BcA223C971a9dbE7f	99.97 ETH	18	0	🔗
0x54E5371D823D78be03cE36834246C6e75847E369	100.00 ETH	1	1	🔗
0x740D995227b0A86F0Fbd0AA4eD75c46e40482a14	100.00 ETH	3	2	🔗
0x59bc75d7d42263888FC9A9430Dc4BE8f48BA1Fa2	100.00 ETH	1	3	🔗
0xadA957d5ACf75AedBC9E44Ad4aB0aa7DF042F8E7	100.00 ETH	0	4	🔗



This screenshot shows the Ganache interface with the following details:

- Transactions:** CURRENT BLOCK 23, GAS PRICE 2000000000, GAS LIMIT 6721975, HARDFORK MUIRGLACIER, NETWORK ID 5777, RPC SERVER HTTP://127.0.0.1:7545, MINING STATUS AUTOMINING.
- Logs:** WORKSPACE TESTING.
- Contract Calls:**
 - TX HASH: 0xc3345e5616981fb7c9f16a66214279d02e3318465129403735d1ecd0f81a7d4b

FROM ADDRESS	TO CONTRACT ADDRESS	GAS USED	VALUE
0x59bc75d7d42263888FC9A9430Dc4BE8f48BA1Fa2	0x59B4F326AF9B962E0eB93ef165fbD2bc72C469D7	42481	0
 - TX HASH: 0xcf0962d8415fdbaccef0edb82d7c4d0c66d0c9e2ea5eb42d7b2cb273b3c6b1

FROM ADDRESS	TO CONTRACT ADDRESS	GAS USED	VALUE
0x740D995227b0A86F0Fbd0AA4eD75c46e40482a14	0x59B4F326AF9B962E0eB93ef165fbD2bc72C469D7	42481	0
 - TX HASH: 0x816b6b1e9616eda54af025ff42f212d25721fa0ef14a82a7f23b599954e83545

FROM ADDRESS	TO CONTRACT ADDRESS	GAS USED	VALUE
0x740D995227b0A86F0Fbd0AA4eD75c46e40482a14	0x59B4F326AF9B962E0eB93ef165fbD2bc72C469D7	42481	0

CURRENT BLOCK	GAS PRICE	GAS LIMIT	HARDFORK	NETWORK ID	RPC SERVER	MINING STATUS	WORKSPACE	SWITCH	⚙️
23	2000000000	6721975	MUIRGLEACIER	5777	HTTP://127.0.0.1:7545	AUTOMINING	TESTING		
BLOCK 23	MINED ON	2022-09-11 22:01:21				GAS USED	42481		1 TRANSACTION
BLOCK 22	MINED ON	2022-09-11 21:47:28				GAS USED	42481		1 TRANSACTION
BLOCK 21	MINED ON	2022-09-11 21:24:50				GAS USED	42481		1 TRANSACTION
BLOCK 20	MINED ON	2022-09-11 20:35:23				GAS USED	27341		1 TRANSACTION
BLOCK 19	MINED ON	2022-09-11 20:35:22				GAS USED	226052		1 TRANSACTION
BLOCK 18	MINED ON	2022-09-11 20:35:21				GAS USED	42341		1 TRANSACTION
BLOCK 17	MINED ON	2022-09-11 20:35:19				GAS USED	164175		1 TRANSACTION

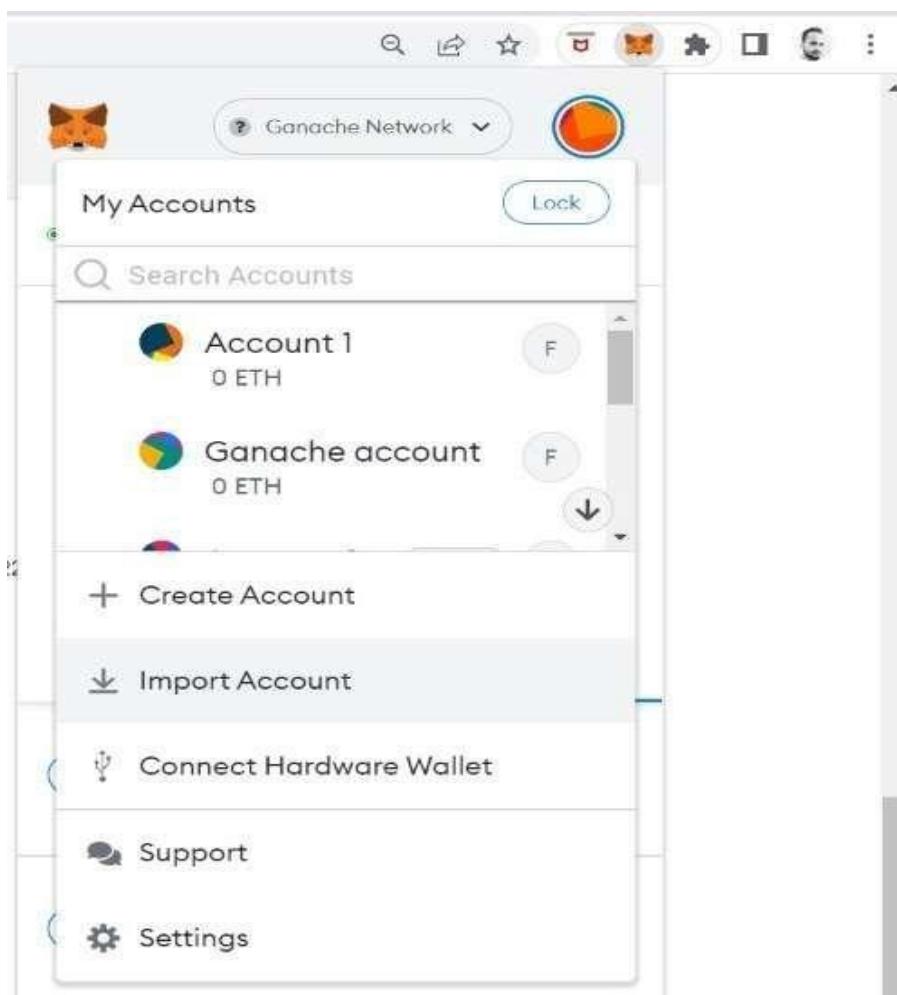
3) Purchase a “Furniture” with the another Ethereum Account

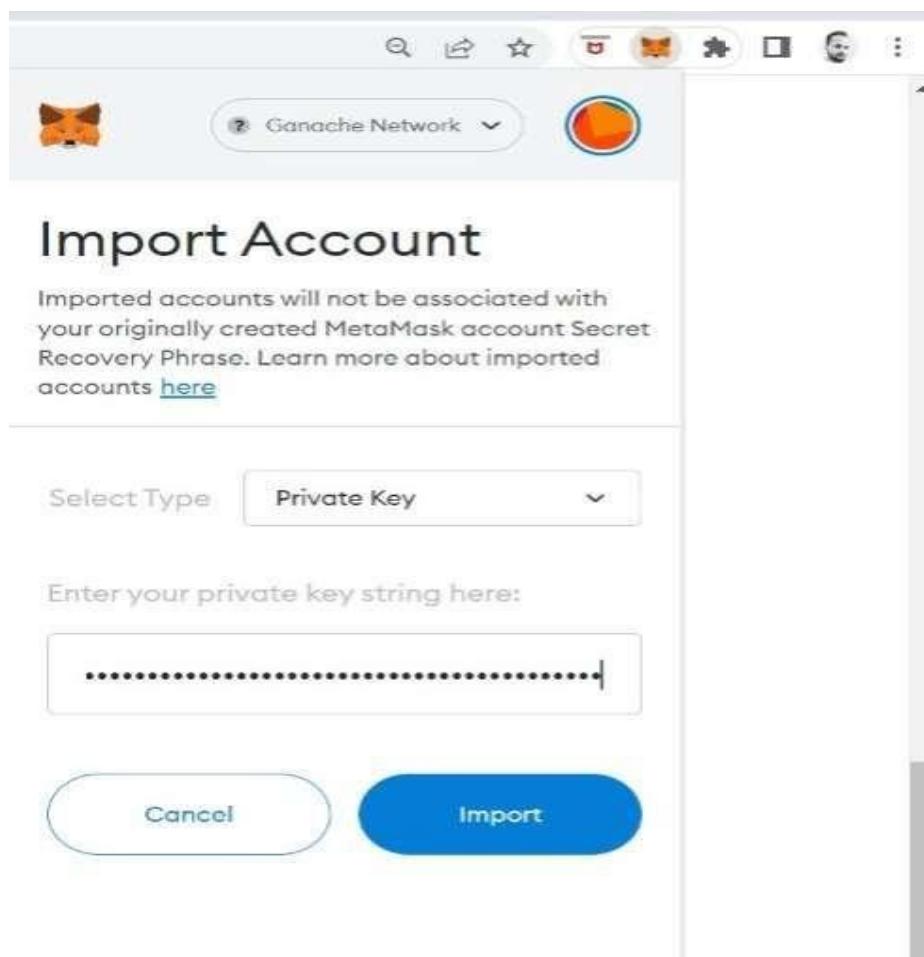
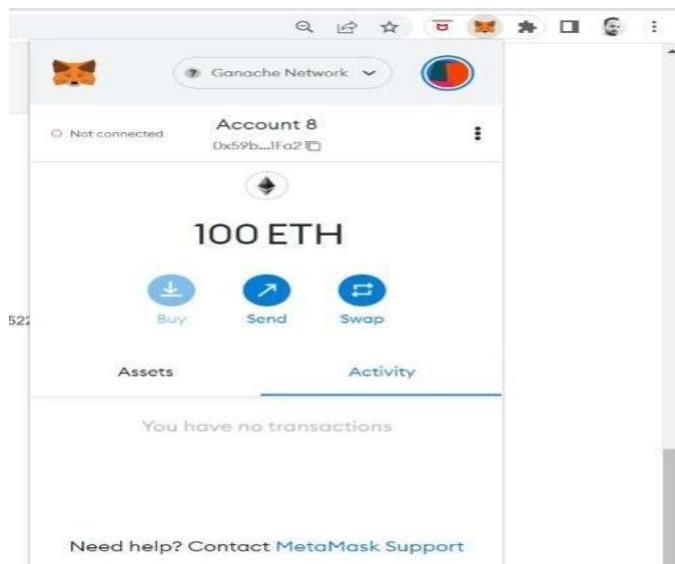
a) Copy the Private key of the Second Ethereum account in Ganache

ADDRESS	BALANCE	TX COUNT	INDEX	🔑
0x7a76AF4De8FF039e853D056BcA223C971a9dbE7f	99.97 ETH	18	0	🔑
0x54E5371D823D78be03cE36834246C6e75847E369	100.00 ETH	1	1	🔑
0xD995227b0A86F0Fbd0AA4eD75c46e40482a14	100.00 ETH	2	2	🔑
0x59bc75d7d42263888FC9A9430Dc4BE8f48BA1Fa2	100.00 ETH	0	3	🔑
0xadA957d5ACf75AedBC9E44Ad4aB0aa7DF042F8E7	100.00 ETH	0	4	🔑

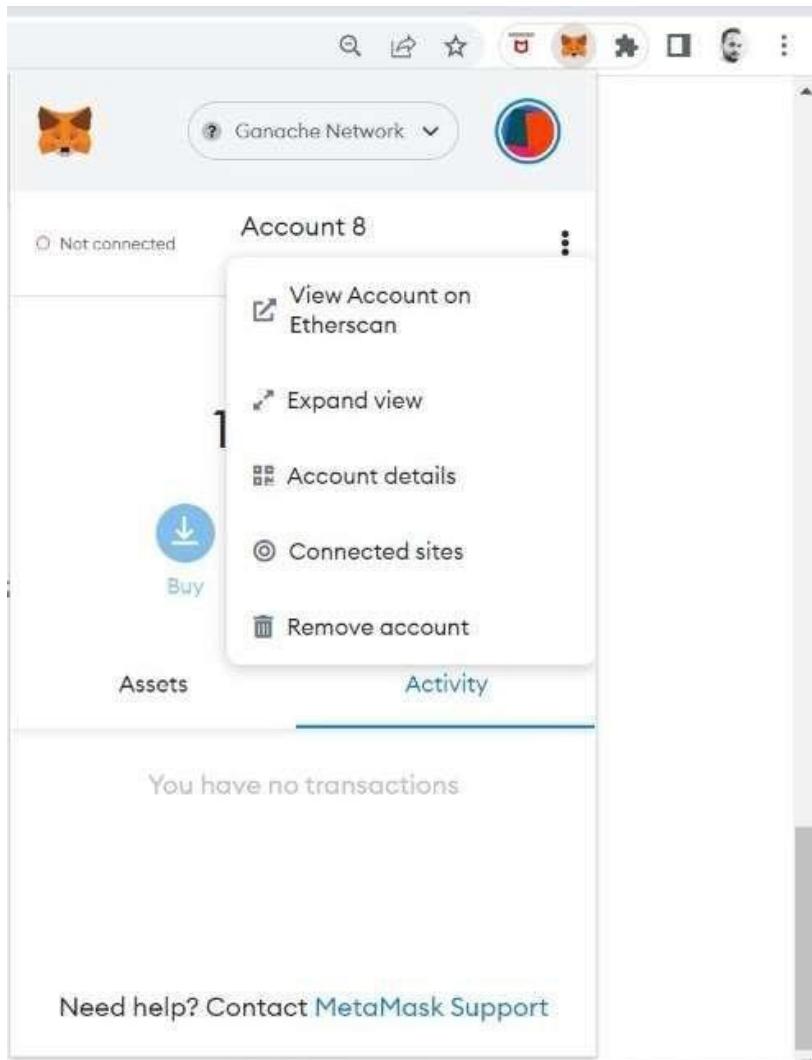


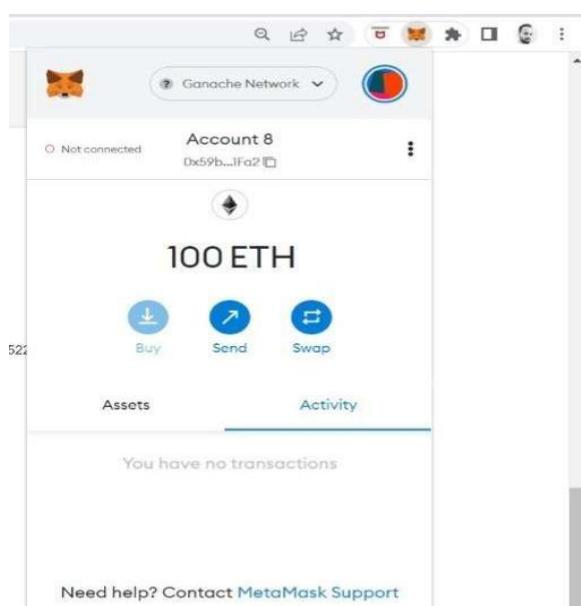
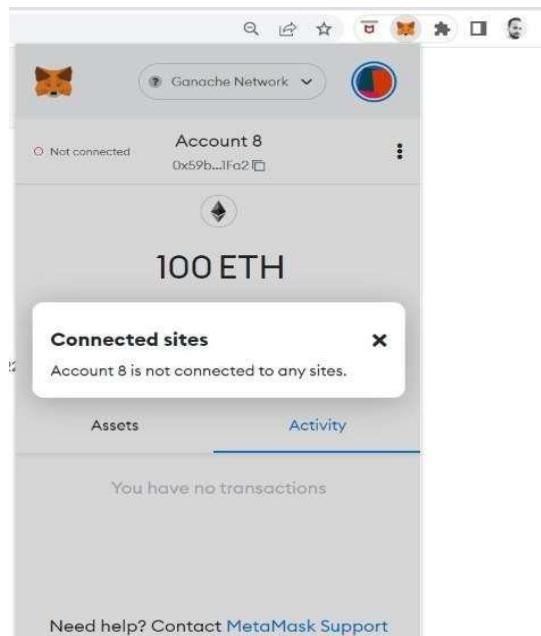
- b) Select the “Ganache Network” in the Metamask, import an account, paste the just copied Private Key and click on “Confirm” button

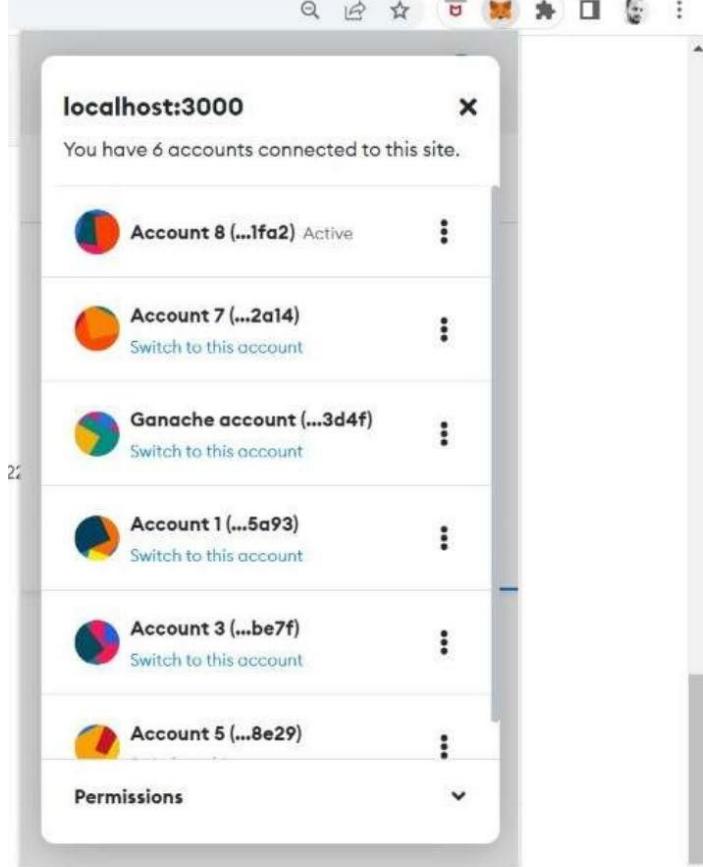
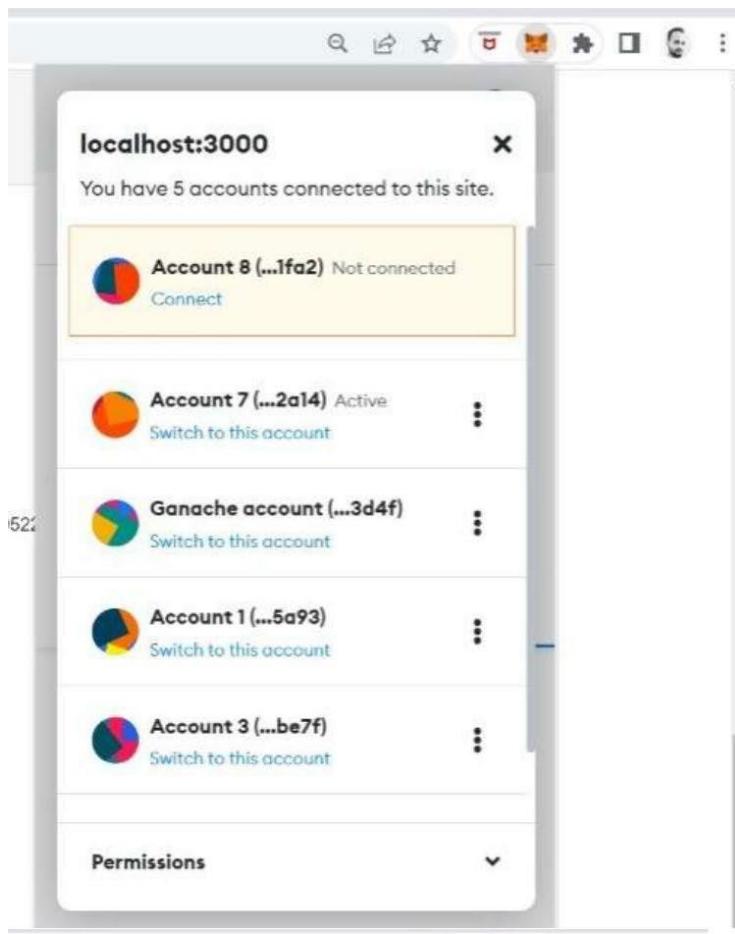




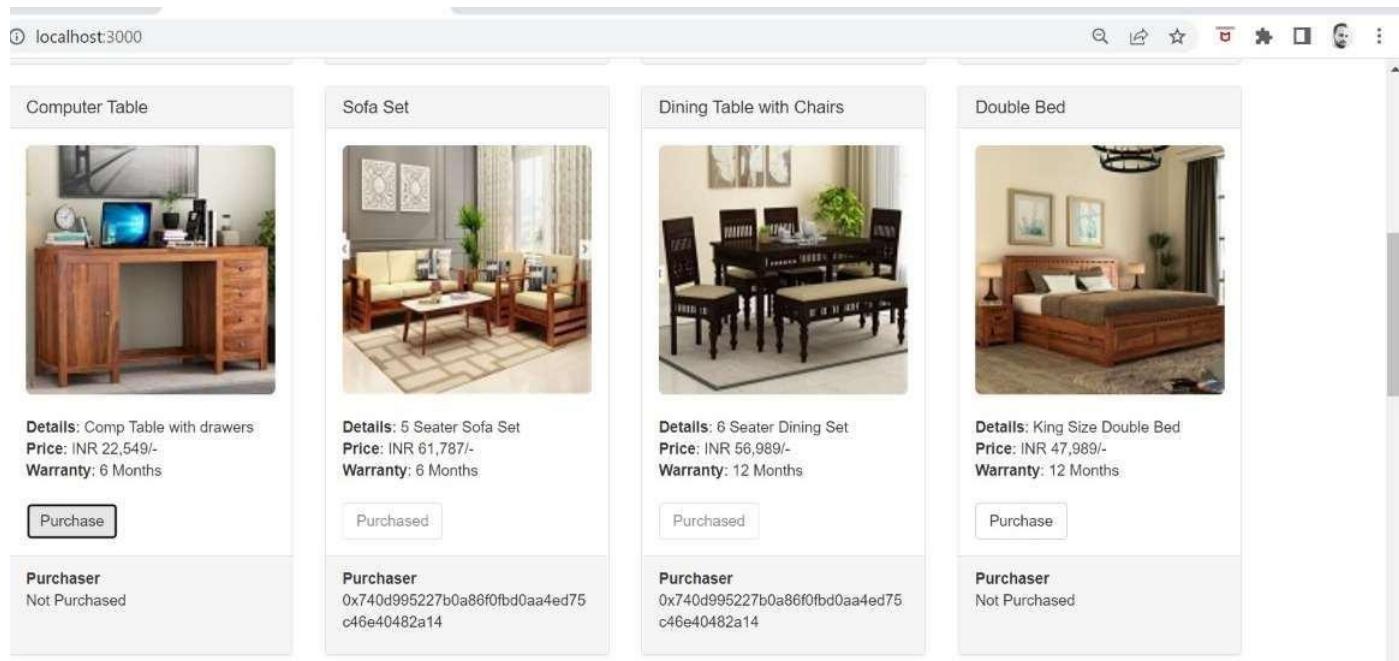
c) Connect the imported account to the “Ganache Test Blockchain and verify



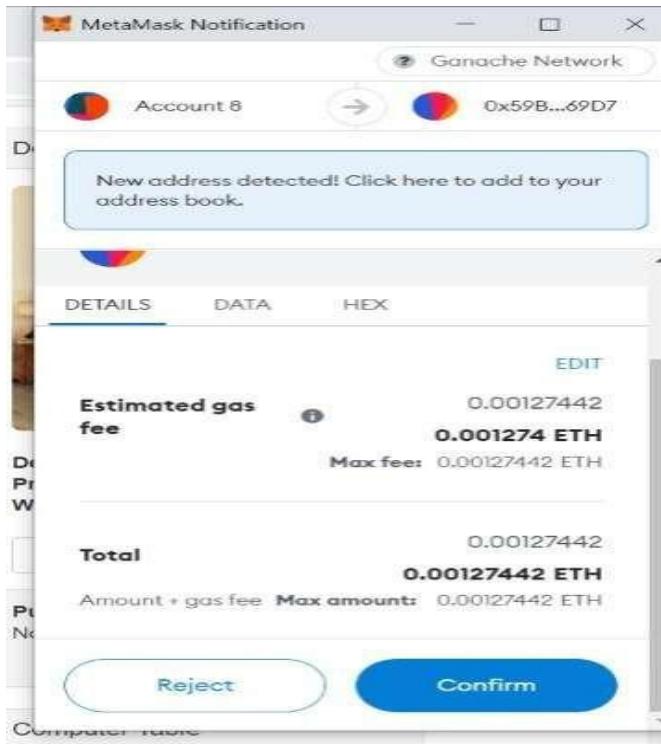




- d) Click on “Purchase” button given under any one of the Furniture pictures which has not been purchased so far



- e) Click on “Confirm” button in the Metamask



Furnitures Purchase Shop Application

The National College
Jayanagar

The screenshot shows a web browser window for 'Furnitures' Purchase Shop' at 'localhost:3000'. On the left, there are four cards for furniture items: 'Computer Table', 'Sofa Set', 'Dining Table with Chairs', and 'Double Bed'. Each card displays an image, details (e.g., 'Details: Comp Table with drawers'), price ('Price: INR 22,549/-'), warranty ('Warranty: 6 Months'), and a 'Purchased' button.

On the right, a sidebar for 'Account 8' (0x59b...f0a2) is shown. It displays '99.9992 ETH' and three buttons: 'Buy', 'Send', and 'Swap'. Below this, tabs for 'Assets' and 'Activity' are present. Under 'Activity', a single entry is listed: 'Purchase Sep 11 · localhost:3000 -0 ETH -0 ETH'. At the bottom, a link 'Need help? Contact MetaMask Support' is visible.

- f) Verify that the “Purchase” button has changed into “Success” and the current “Purchaser” Account address is getting displayed below the picture of purchased Furniture. Also, verify that the Purchaser’s Ethereum account info is captured in the “List of Purchasers”

The screenshot shows the same web browser window after a purchase. The 'Purchase' button for the 'Double Bed' item has changed to 'Success'. Below the image of the double bed, the 'Purchaser' information is now displayed as 'Not Purchased'.

List of Purchasers

Furniture ID: 0
Purchaser:

Furniture ID: 2
Purchaser:

Furniture ID: 4
Purchaser: 0x59bc75d7d42263888fc9a9430dc4be8f48ba1fa2

Furniture ID: 6
Purchaser: 0x740d995227b0a86f0fb0aa4ed75c46e40482a14

Furniture ID: 8
Purchaser:

Furniture ID: 10
Purchaser:

Furniture ID: 12
Purchaser:

Furniture ID: 14
Purchaser:

Furniture ID: 1
Purchaser:

Furniture ID: 3
Purchaser:

Furniture ID: 5
Purchaser: 0x740d995227b0a86f0fb0aa4ed75c46e40482a14

Furniture ID: 7
Purchaser:

Furniture ID: 9
Purchaser:

Furniture ID: 11
Purchaser:

Furniture ID: 13
Purchaser:

Furniture ID: 15
Purchaser:

g) Verify the Ganache TX COUNT, Transaction and New Block Creation

The screenshot shows the Ganache UI interface. At the top, there are tabs for ACCOUNTS, BLOCKS, TRANSACTIONS, CONTRACTS, EVENTS, and LOGS. A search bar is located at the top right. Below the tabs, there are several configuration fields: CURRENT BLOCK (22), GAS PRICE (20000000000), GAS LIMIT (6721975), HARDFORK (MUIRGLACIER), NETWORK ID (5777), RPC SERVER (HTTP://127.0.0.1:7545), and MINING STATUS (AUTOMINING). To the right, there are buttons for WORKSPACE (TESTING) and SWITCH, along with a gear icon.

MNEMONIC: often occur mouse lunar focus pole marble employ steel fan beach detail

HD PATH: m/44'/60'/0'/0/account_index

ADDRESS	BALANCE	TX COUNT	INDEX	
0x7a76AF4De8Ff039e853D056BcA223C971a9dbE7f	99.97 ETH	18	0	🔑
0x54E5371D823D78be03cE36834246C6e75847E369	100.00 ETH	1	1	🔑
0x740D995227b0A86F0Fbd0AA4eD75c46e40482a14	100.00 ETH	3	2	🔑
0x59bc75d7d42263888FC9A9430Dc4BE8f48BA1Fa2	100.00 ETH	0	3	🔑
0xadA957d5ACf75AedBC9E44Ad4aB0aa7DF042F8E7	100.00 ETH	0	4	🔑

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The screenshot shows the Ganache interface with three transaction details listed:

- TX HASH:** 0xc3345e5616981fb7c9f16a66214279d02e3318465129403735d1ecd0f81a7d4b
 CONTRACT CALL

FROM ADDRESS	0x59bc75d7d42263888FC9A9430Dc4BE8F48BA1Fa2	TO CONTRACT ADDRESS	0x59B4F326Af9B962E0eB93ef165fb02bc72C469D7	GAS USED	42481	VALUE	0
--------------	--	---------------------	--	----------	-------	-------	---
- TX HASH:** 0xcf0962d8415fdbaccef0edb82d7c4d0c66d0c9e2ea5eab42d7b2cb273b3c6b1
 CONTRACT CALL

FROM ADDRESS	0x740D995227b0A86F0Fbd0AA4eD75c46e40482a14	TO CONTRACT ADDRESS	0x59B4F326Af9B962E0eB93ef165fb02bc72C469D7	GAS USED	42481	VALUE	0
--------------	--	---------------------	--	----------	-------	-------	---
- TX HASH:** 0x816b6b1e9616eda54af025ff42f212d25721fa0ef14a82a7f23b599954e83545
 CONTRACT CALL

FROM ADDRESS	0x740D995227b0A86F0Fbd0AA4eD75c46e40482a14	TO CONTRACT ADDRESS	0x59B4F326Af9B962E0eB93ef165fb02bc72C469D7	GAS USED	42481	VALUE	0
--------------	--	---------------------	--	----------	-------	-------	---

The screenshot shows the Ganache interface with a list of blocks:

BLOCK	MINED ON	GAS USED	
23	2022-09-11 22:01:21	42481	1 TRANSACTION
22	2022-09-11 21:47:28	42481	1 TRANSACTION
21	2022-09-11 21:24:50	42481	1 TRANSACTION
20	2022-09-11 20:35:23	27341	1 TRANSACTION
19	2022-09-11 20:35:22	226052	1 TRANSACTION
18	2022-09-11 20:35:21	42341	1 TRANSACTION
17	2022-09-11 20:35:19	164175	1 TRANSACTION

XIII) Project Summary

This project has given us a valuable exposure to the nodejs, npm, Truffle, Ethereum Test Blockchain (Ganache), Solidity, Metamask, Web3, HTML, CSS, JavaScript, jQuery technologies.

This project has also provided the experience of integrating them seamlessly so that the designed, developed and tested “Furniture’s Purchase Shop Application” meets the defined “Project Goal”.

XIV) Limitation of Project

- 1. Metamask.**
- 2. Ganache.**
- 3. VS Code.**
- 4. One Ganache Network.**
- 5. One Metamask Account.**

XV) Reference:-

Google Drive Link:

https://drive.google.com/drive/folders/1PNHQKjD2Bu7sC4hCkPmUqyD3q5q_fWM
<https://drive.google.com/drive/folders/1D7EUjFtxCVwFWVfHKRzFG3Grll5MamN>
<https://drive.google.com/drive/folders/1m6qlzpDnM43TESV1J9GDccRXKc1Cw8Pd>
<https://drive.google.com/drive/folders/1mqO1TdPqUXE8JAUC83kon-fiHcIVfSon>