

# day89-sol-real-estate-starter

☰ 태그	
📅 날짜	@2023년 2월 2일

- `npm install lite-server --save-dev`

lite-server란 Node.js 기반의 경량 웹서버이다.

html 또는 javascript 변경을 감지하고 socket을 이용하여 css변경을 주입하는 등의 유용한 기능을 제공한다.

위 명령어를 입력하면 lite-server가 node\_module(node.js 프로젝트의 의존성을 모아놓은 디렉터리) 디렉터리에 설치된다. --save-dev 옵션은 현재 프로젝트 모듈에 lite-server 모듈을 설치하고 package.json 의존성 정보를 업데이트해준다.

실행 명령어

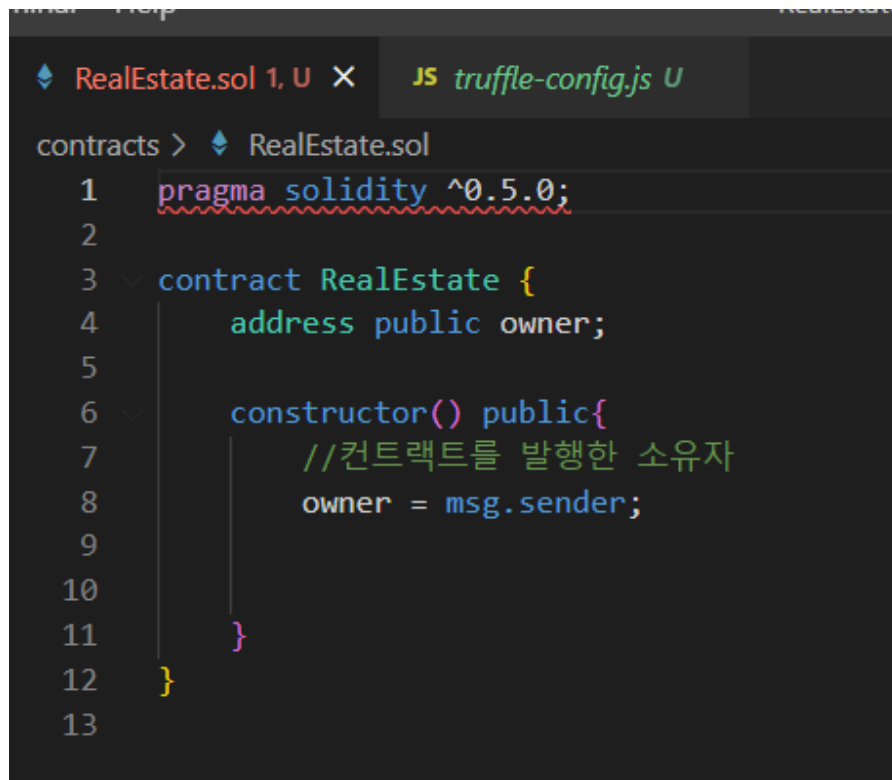
- `npm run dev`

(사이트창 확인)

가나슈 실행(임시 로컬 이더리움, 로컬메인넷)

질문) 트러플 컨트랙트 배포하려면 명령어는? - `truffle migrate --network ganache`

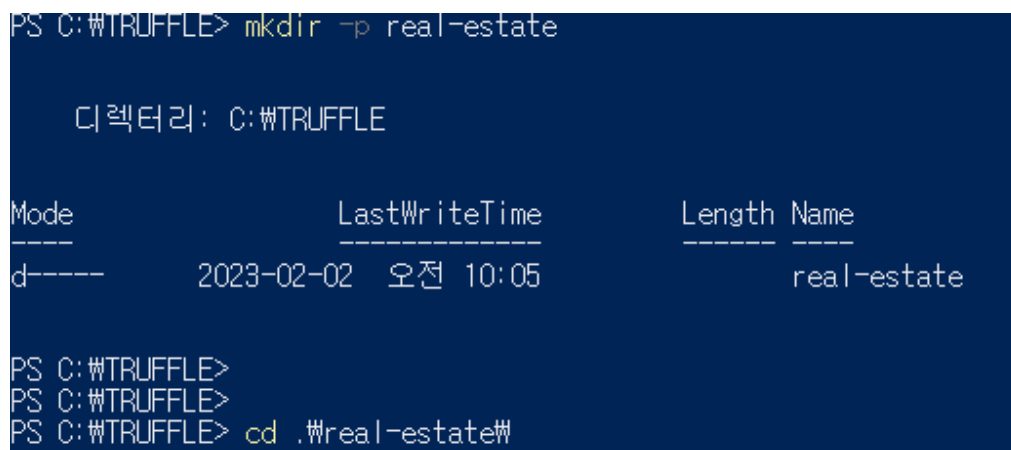
truffle.js 파일명을 truffle-config.js로 변경



```
contracts > RealEstate.sol
1  pragma solidity ^0.5.0;
2
3  contract RealEstate {
4      address public owner;
5
6      constructor() public{
7          //컨트랙트를 발행한 소유자
8          owner = msg.sender;
9      }
10 }
11
12
13
```

0.4.x 버전에서 0.5.0버전으로 변경해주었다.

기존 버전이랑 달라서 처음부터 다시 설치해야한다.



```
PS C:\WTRUFFLE> mkdir -p real-estate

디렉터리: C:\WTRUFFLE

Mode                LastWriteTime         Length Name
----                -
d-----          2023-02-02 오전 10:05             real-estate

PS C:\WTRUFFLE>
PS C:\WTRUFFLE>
PS C:\WTRUFFLE> cd .\real-estate\
PS C:\WTRUFFLE\real-estate>
```

펫샵을 변경해서 사용하기로 했다.

- truffle unbox pet-shop
- code .

development → ganache

8545로 변경

```
JS truffle-config.js > ...
1  module.exports = {
2    // See <http://truffleframework.com/docs/advanced/configuration>
3    // for more about customizing your Truffle configuration!
4    networks: {
5      ganache: {
6        host: "127.0.0.1",
7        port: 8545,
8        network_id: "*" // Match any network id
9      },
10     develop: {
11       port: 8545
12     }
13   }
14 };
15
```

---

## 5.2 real-estate-starter 파일에서 Real-estate파일로

복사 붙여넣기

app.js

index.html

/contracts/Migration.sol

/contracts/RealEstate.sol

/migrations/1\_initial\_migration

/migrations/2\_deploy\_contracts

pet-shop.json → real-estate.json (이름변경)

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가나슈 실행

트리플 컨트랙트 배포 명령어 - truffle migrate --network ganache

- truffle migrate --network ganache

```
C:\TRUFFLE\real-estate>truffle migrate --network ganache

Compiling your contracts...
=====
> Everything is up to date, there is nothing to compile.

Starting migrations...
=====
> Network name:      'ganache'
> Network id:        5777
> Block gas limit: 0x6691b7

1_initial_migration.js
=====

  Deploying 'Migrations'
  -----
  > transaction hash: 0x27e9a3f8346645ce0e6dca171a14be95baf629c85c517bef03e92fec2ad22744
  > Blocks: 0        Seconds: 0
  > contract address: 0x109f5EaA80C80B54E30E0e1d02FC359De382f1bE
  > block number:     1
  > block timestamp:  1675302285
  > account:          0xEa9F1CaD98Db8dc21f00814FdaF9CC6c558fcF9
  > balance:          99.99549526
  > gas used:         225237
  > gas price:         20 gwei
  > value sent:       0 ETH
  > total cost:       0.00450474 ETH
```

```

> Saving artifacts
-----
> Total cost:          0.00450474 ETH

2_deploy_contracts.js
=====

Deploying 'RealEstate'
-----
> transaction hash:    0xae455cc529f104aa32bb6d19b575cb24ea3c159f63dfcaae39d21123115a66bd
> Blocks: 0           Seconds: 0
> contract address:   0x955bae05c00945653Ca19775296E8F0cE05Ad2bA
> block number:       3
> block timestamp:    1675302286
> account:            0xeEa9F1CaD98Db8dc21f00814FdaF9CC6c558fcF9
> balance:            99.99224754
> gas used:           120023
> gas price:          20 gwei
> value sent:         0 ETH
> total cost:         0.00240046 ETH

> Saving migration to chain.
> Saving artifacts
-----
> Total cost:          0.00240046 ETH

Summary
=====
> Total deployments:   2
> Final cost:          0.0069052 ETH

```

마이그레이션 되면서 컴파일과 배포까지 된다.

가나슈의 배포된 로컬 네트워크로 접속

- `truffle console --network ganache`
- `RealEstate.deployed().then(function(instance) { app = instance;})`

undefined

- `app.owner.call()`

컨트랙트 주소

```

C:\TRUFFLE\real-estate>truffle console --network ganache
truffle(ganache)> RealEstate.deployed().then(function(instance) { app = instance;})
undefined
truffle(ganache)> app.owner.call()
'0xeEa9F1CaD98Db8dc21f00814FdaF9CC6c558fcF9'
truffle(ganache)>

```

## /test/TestRealEstate.js 파일 생성

```
var RealEstate = artifacts.require("./RealEstate.sol");

contract('RealEstate', function(accounts){

    var realEstateInstance;

    it("컨트랙의 소유자 초기화 테스트", function(){
        return RealEstate.deployed().then(function(instance){
            realEstateInstance = instance;
            return realEstateInstance.owner.call();
        }).then(function(owner){
            //대문자
            assert.equal(owner.toUpperCase(),accounts[0].toUpperCase(),
                "owner가 가나슈 첫번째 계정과 동일하지 않습니다.");
        });
    });

});
```

- truffle test --network ganache

```
C:\TRUFFLE\real-estate>truffle test --network ganache
Using network 'ganache'.

Compiling your contracts...
=====
> Everything is up to date, there is nothing to compile.

Contract: RealEstate
  ✓ 컨트랙의 소유자 초기화 테스트 (170ms)

1 passing (229ms)

C:\TRUFFLE\real-estate>
```

만약 테스트가 실패 했을 시

```
C:\TRUFFLE\real-estate>truffle test --network ganache
Using network 'ganache'.

Compiling your contracts...
=====
> Everything is up to date, there is nothing to compile.

Contract: RealEstate
  1) 컨트랙트의 소유자 초기화 테스트
    > No events were emitted

0 passing (257ms)
1 failing

1) Contract: RealEstate
   컨트랙트의 소유자 초기화 테스트:

   owner가 가나슈 첫번째 계정과 동일하지 않습니다.
   + expected - actual

   -0XEEA9F1CAD98DB8DC21F00814FDAF9CC6C558FCF9
   +0X76CBBCEF4E4E7AF2BFA55C8F4116F21BEC5BF670

   at C:\TRUFFLE\real-estate\test\TestRealEstate.js:13:20
   at processTicksAndRejections (node:internal/process/task_queues:96:5)
```

/contracts/RealEstate.sol

```
pragma solidity ^0.5.0;








contract RealEstate {
    struct Buyer{
        address buyerAddress;
        string name;
        uint256 age;
    }

    mapping(uint => Buyer) public buyerInfo;

    address payable public owner;
```












ADDRESS	BALANCE	TX COUNT	INDEX	
0xeEa9F1CaD98Db8dc21f00814FdaF9CC6c558fcF9	100.05 ETH	20	0	
ADDRESS	BALANCE	TX COUNT	INDEX	
0x76cBBCEf4E4E7aF2bfa55C8f4116f21bec5bf670	99.90 ETH	1	1	
ADDRESS	BALANCE	TX COUNT	INDEX	
0xCc90d849A83DFD1D4A19750F2393424179509BB	100.00 ETH	0	2	
ADDRESS	BALANCE	TX COUNT	INDEX	
0x80aD114F5aa33808680486C314aED03Cdca81111	100.00 ETH	0	3	
ADDRESS	BALANCE	TX COUNT	INDEX	
0x369171cE10cB8803CEB976811A2aa04B066b1BAAd	100.00 ETH	0	4	
ADDRESS	BALANCE	TX COUNT	INDEX	
0xd263b61266a1534be191e11ab275eC009eacd4C2	100.00 ETH	0	5	
ADDRESS	BALANCE	TX COUNT	INDEX	
0xFd8c829167062627782BB0E4022727cE21451823	100.00 ETH	0	6	

2번째에서 1번째 주소로 0.1eth가 보내진것을 확인할 수 있다.

[illegible]

ADDRESS 0xeEa9F1CaD98Db8dc21f00814FdaF9CC6c558fcF9	BALANCE 100.15 ETH	TX COUNT 20	INDEX 0	
ADDRESS 0x76cBBcef4E4E7aF2bfa55C8f4116f21bec5bf670	BALANCE 99.90 ETH	TX COUNT 1	INDEX 1	
ADDRESS 0xCcC90d849A83DFD1D4A19750F2393424179509BB	BALANCE 99.90 ETH	TX COUNT 1	INDEX 2	
ADDRESS 0x80aD114F5aa33808680486C314aED03Cdca81111	BALANCE 100.00 ETH	TX COUNT 0	INDEX 3	
ADDRESS 0x369171cE10cB8803CEB976811A2aa04B066b1BAAd	BALANCE 100.00 ETH	TX COUNT 0	INDEX 4	
ADDRESS 0xd263b61266a1534be191e11ab275eC009eacd4C2	BALANCE 100.00 ETH	TX COUNT 0	INDEX 5	
ADDRESS 0xFd8c829167062627782BB0E4022727cE21451823	BALANCE 100.00 ETH	TX COUNT 0	INDEX 6	

3번째에서 1번째로 0.1eth가 보내진것을 확인 할 수 있다.