

Feel free to copy and paste this into the Remix IDE if you haven't been following along through the previous lessons.

Creating a Base Contract

A common pattern in smart contracts when it concerns inheritance is to define an owner address and a modifier that gives only the smart contract owner the ability to access certain functions.

Above the `contract Courses` line, we're going to create a new base contract for that purpose:

```

pragma solidity ^0.4.18;

contract Owned {
    address owner;

    function Owned() public {
        owner = msg.sender;
    }

    modifier onlyOwner {
        require(msg.sender == owner);
    }
}

contract Courses is Owned {
    // Other code removed for brevity
}

```

If you followed along with this course, you'll notice that the code in the `Owned` contract is familiar. We're setting the owner address to the creator of the contract, and a modifier.

Also, note that we added `Owned` onto the `contract Courses` line. That's how you make a contract inherit from a base contract.

We can assure that this works by adding the `onlyOwner` modifier to the `setInstructor` function in the derived contract:

```

// Other code removed for brevity

function setInstructor(address _address, uint _age, bytes16 _fname, bytes16 _lname) onlyOwner public {
    // Other code removed for brevity
}

```

If you create this contract and try to set an instructor as we've been doing in this previous lessons, it will only work if you set it with the address that was used to deploy the contract.

This works because our `Courses` contract inherits from the `Owned` contract.

This, in a nutshell, is how inheritance works in Solidity. You can even pass in arguments from inherited contracts, but that's a topic we will touch on in a different tutorial in the future. For now, we're just sticking to the basics.

Remix - Ethereum IDE

```

function Owned() public {
    owner = msg.sender;
}

modifier onlyOwner {
    require(msg.sender == owner);
    ...
}

contract Courses is Owned {

    struct Instructor {
        uint age;
        bytes16 fName;
        bytes16 lName;
    }

    mapping (address => Instructor) instructors;
    address[] public instructorAccts;

    event InstructorInfo(
        bytes16 fName,
        bytes16 lName,
        uint age
    );

    function setInstructor(address _address, uint _age, bytes16 _fName, bytes16 _lName) onlyOwner public {
        var instructor = instructors[_address];

        instructor.age = _age;
        instructor.fName = _fName;
        instructor.lName = _lName;

        instructorAccts.push(_address) -1;
        instructorInfo(_fName, _lName, _age);
    }
}

```

Remix - Ethereum IDE

```

pragma solidity ^0.4.21;
contract Courses is Owned {
    address owner;
    function Owned() public {
        owner = msg.sender;
    }
    modifier onlyOwner {
        require(msg.sender == owner);
        ...
    }
}

```

Environment Web3 ProviderCustom (1586197159513)

Account 0x48...4c98e (99.99999999999383951)

Gas limit 3000000

Value 0 wei

Courses Deploy or At Address Load contract from Address

Transactions recorded: 0 Deployed Contracts

Currently you have no contract instances to interact with.

[2] only remix transactions, script

call to Courses.getInstructor errored: Error encoding arguments: Error: invalid address (arg="", type="string", value="")

call to Courses.getInstructors

[call] from 0x00bed076ff33749a83334590dd to:Courses.getInstructors() data:0x5ef...f7dae

12:12 PM 4/6/2020

Remix - Ethereum IDE

```

struct Instructor {
    uint age;
    bytes16 fName;
    bytes16 lName;
}

mapping (address => Instructor) instructors;
address[] public instructorAccts;

event InstructorInfo(
    bytes16 fName,
    bytes16 lName,
    uint age
);

function setInstructor(address _address, uint _age, bytes16 _fName, bytes16 _lName) onlyOwner public {
    var instructor = instructors[_address];

    instructor.age = _age;
    instructor.fName = _fName;
    instructor.lName = _lName;

    instructorAccts.push(_address) -1;
    instructorInfo(_fName, _lName, _age);
}

function getInstructors() view public returns(address[]) {
    return instructorAccts;
}

function getInstructor(address _address) view public returns (uint, bytes16, bytes16) {
    return (instructors[_address].age, instructors[_address].fName, instructors[_address].lName);
}

function countInstructors() view public returns (uint) {
    return instructorAccts.length;
}

```

Remix - Ethereum IDE

```

pragma solidity ^0.4.21;
contract Courses is Owned {
    address owner;
    function Owned() public {
        owner = msg.sender;
    }
    modifier onlyOwner {
        require(msg.sender == owner);
        ...
    }
}

```

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12:12 PM 4/6/2020

Remix - Ethereum IDE

```

event InstructorInfo(
    bytes16 fName,
    bytes16 lName,
    uint age
);

function setInstructor(address _address, uint _age, bytes16 _fName, bytes16 _lName) onlyOwner public
    var instructor = instructors[_address];

    instructor.age = _age;
    instructor.fName = _fName;
    instructor.lName = _lName;

    instructorAccts.push(_address);
    [instructorInfo,_fName,_lName,_age];
}

function getInstructors() view public returns(address[])
{
    return instructorAccts;
}

function getInstructor(address _address) view public returns (uint,bytes16,bytes16) {
    return (instructors[_address].age, instructors[_address].fName, instructors[_address].lName);
}

function countInstructors() view public returns (uint) {
    return instructorAccts.length;
}

```

browser

```

ballot_test.sol 28
ballot.sol 29
Courses.sol 30
Courses.sol 31
config 32
        _age, bytes16 fName, bytes16 lName)
onlyOwner public (
    InstructorStorage instructor =
    instructors[_address];
    instructor.age = _age;
    instructor.fName = _fName;
    instructor.lName = _lName;
    instructorAccts.push(_address);
    [instructorInfo,_fName,_lName,_age];
}

function getInstructors() view public returns
    (address[])
{
    return instructorAccts;
}

function getInstructor(address _address) view public returns
    (uint,bytes16,bytes16)
{
    return (instructors[_address].age, instructors[_address].fName, instructors[_address].lName);
}

function countInstructors() view public returns
    (uint)
{
    return instructorAccts.length;
}

```

Environment

Web3 ProviderCustom (1586197159513)

Account 0x48...4c98e (99.99999999999383951)

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Courses

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call to Courses.getInstructors

[call]
From:0x48...4c98e(76ff33749a83334590dd
to:Courses.getInstructors()
data:0x5ef...f7dae Debug

12:13 PM 4/6/2020

Remix - Ethereum IDE

```

event InstructorInfo(
    bytes16 fName,
    bytes16 lName,
    uint age
);

function setInstructor(address _address, uint _age, bytes16 _fName, bytes16 _lName) onlyOwner public
    var instructor = instructors[_address];

    instructor.age = _age;
    instructor.fName = _fName;
    instructor.lName = _lName;

    instructorAccts.push(_address);
    [instructorInfo,_fName,_lName,_age];
}

function getInstructors() view public returns(address[])
{
    return instructorAccts;
}

function getInstructor(address _address) view public returns (uint,bytes16,bytes16) {
    return (instructors[_address].age, instructors[_address].fName, instructors[_address].lName);
}

function countInstructors() view public returns (uint) {
    return instructorAccts.length;
}

```

browser

```

ballot_test.sol 28
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        _age, bytes16 fName, bytes16 lName)
onlyOwner public (
    InstructorStorage instructor =
    instructors[_address];
    instructor.age = _age;
    instructor.fName = _fName;
    instructor.lName = _lName;
    instructorAccts.push(_address);
    [instructorInfo,_fName,_lName,_age];
}

function getInstructors() view public returns
    (address[])
{
    return instructorAccts;
}

function getInstructor(address _address) view public returns
    (uint,bytes16,bytes16)
{
    return (instructors[_address].age, instructors[_address].fName, instructors[_address].lName);
}

function countInstructors() view public returns
    (uint)
{
    return instructorAccts.length;
}

```

Environment

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Account 0x48...4c98e (99.99999999999383951)

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call to Courses.getInstructors

[call]
From:0x48...4c98e(76ff33749a83334590dd
to:Courses.getInstructors()
data:0x5ef...f7dae Debug

12:13 PM 4/6/2020

Continuing our Project

We're nearly at the end of the course, but we're going to spend the rest of this lesson by setting up a lite-server and reworking the Web3 UI to work with this new smart contract.

At this point, our contract is written and ready to go. We won't be adding anymore to it in this course.

We will be installing the MetaMask chrome plugin, which will allow us to connect to the Ropsten test network to more accurately simulate the experience of the dapp on the live Ethereum blockchain. Because of this, we have to install a lite-server in order for MetaMask to inject an instance of the Web3 API. If we don't, MetaMask will not work by just loading our index.html file into the browser straight from the hard drive.

Visit your console in the project folder we've been working in, and use npm to install the lite-server package:

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

Note: If you have problems running this command as I did, make sure you are running your console as administrator.

Next, open up your code editor and inside of the `package.json` file, add this under scripts:

```
"scripts": {
  "dev": "lite-server"
},
```

Open the Remix IDE and browser/Courses.sol. Deploy the contract. In the browser, go to `http://localhost:3000`. You should see the courses listed.

Open the terminal and run the following commands:

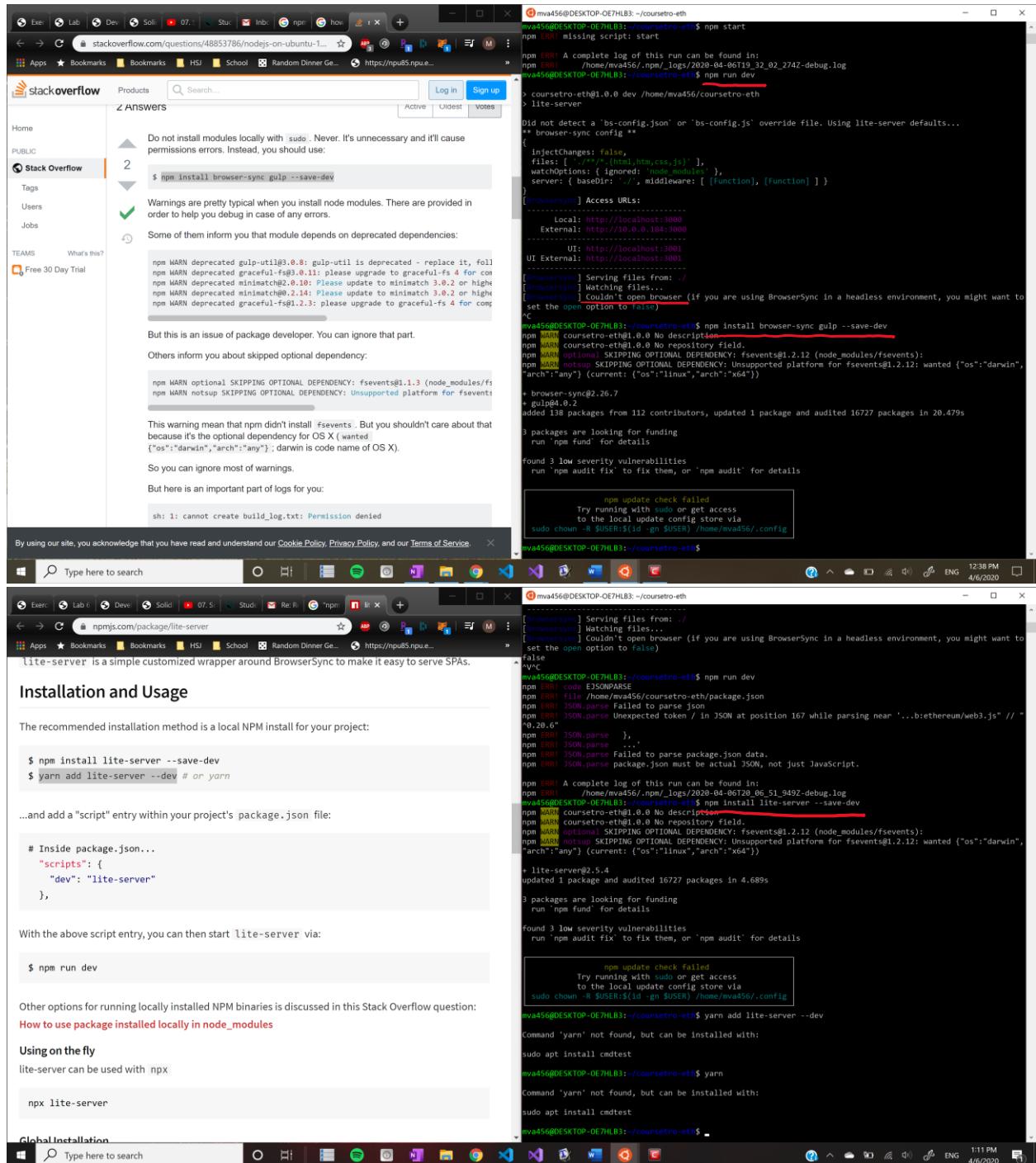
```
mva456@DESKTOP-OE7HLB3:~/coursetro-eth$ cd coursetro-eth
mva456@DESKTOP-OE7HLB3:~/coursetro-eth$ npm install lite-server --save-dev
npm WARN coursetro-eth@1.0.0 No description
npm WARN coursetro-eth@1.0.0 No repository field.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.12 (node_modules/fsevents):
npm WARN not found Unsupported platform for fsevents@1.2.12: wanted {"os":"darwin", "arch":"any"} (current: {"os":"linux", "arch":"x64"})
+ lite-server@2.5.4
added 180 packages from 158 contributors and audited 6712 packages in 23.497s
2 packages are looking for funding
  run 'npm fund' for details
Found 3 low severity vulnerabilities
  run 'npm audit fix' to fix them, or 'npm audit' for details

  npm update check failed
    Try running with sudo on get access
    to the local update config store via
    sudo chown -R $USER:$ID /tmp/.npm/_config
mva456@DESKTOP-OE7HLB3:~/coursetro-eth$
```

The screenshot shows a dual-monitor setup. The left monitor displays a YouTube video titled "07. Solidity Inheritance Tutorial & Deploying the Contract" by DesignCourse. The video has 15,759 views and was uploaded on Nov 1, 2017. The right monitor shows a terminal window with the command `mva456@DESKTOP-OE7HLB3:~/coursetro-eth$ geany package.json`. The terminal output shows the contents of the package.json file:

```
1 {  
2   "name": "coursetro-eth",  
3   "version": "1.0.0",  
4   "description": "",  
5   "main": "index.js",  
6   "scripts": {  
7     "test": "echo \\\"Error: no test specified\\\" & exit 1",  
8     "dev": "lite-server"  
9   },  
10  "author": "",  
11  "license": "ISC",  
12  "dependencies": {  
13    "web3": "github:ethereum/web3.js"  
14  },  
15  "devDependencies": {  
16    "lite-server": "~2.3.0"  
17  }  
18}  
19
```

The terminal also shows the status bar indicating the file is opened in Geany.



The image shows a Windows desktop environment with four browser windows open, illustrating the process of interacting with Ethereum blockchain components.

Top Left Window: A screenshot of a web browser showing the "Create a MetaMask account" step. It displays a wallet interface with 5.9982 ETH and a history of three contract deployments. Below it, a "MetaMask Ether Faucet" window shows a "faucet" section with a green "Request 1 ether from faucet on Ropsten Test Network" button and a "User" section with a "Get Ether" button.

Top Right Window: A screenshot of the MetaMask extension interface on the "Main Ethereum Network". It shows "Account 1" with 0 ETH and a balance of \$0.00 USD. A message says "You have no transactions".

Bottom Left Window: A screenshot of the "MetaMask Ether Faucet" window, identical to the one in the top-left browser, showing the "Request 1 ether from faucet on Ropsten Test Network" button.

Bottom Right Window: A screenshot of the "Deposit Ether" dialog box from the MetaMask extension. It provides instructions for depositing Ether and includes a "View Account" button. Below it, a "Test Faucet" section has a "Get Ether" button.

The taskbar at the bottom shows various pinned icons, including "Exe", "Lab", "Dev", "Soll", "YouTube", "Star", "Re:", "Ubu", "Remix - Ethereum IDE", and "MetaMask". The system tray indicates the date and time as 12:56 PM on 4/6/2020.

Request 1 ether from faucet on Ropsten Test Network

MetaMask Ether Faucet

faucet

address: 0x81b7e08f85bd564860c89998a9cc8164397647
balance: 91493024.47 ether

[Request 1 ether from faucet]

user

address: undefined
balance: ...
donate to faucet:

[1 ether] [10 ether] [100 ether]

transactions

Type here to search

2. Create a Lab7.sol on Remix IDE:

```

pragma solidity ^0.4.19;
contract Courses {
    struct Instructor {
        uint age;
        bytes16 fName;
        bytes16 lName;
    }
    mapping (address => Instructor) instructors;
    address[] public instructorAccts;
    event InstructorInfo(
        bytes16 fName,
        bytes16 lName,
        uint age
    );
}
contract Owned {
    address owner;
    modifier onlyOwner {
        require(msg.sender == owner);
        _;
    }
}

```

ABI Code:

```

[{"constant": true, "inputs": [{"name": "_address", "type": "address"}], "name": "getInstructor", "outputs": [{"name": "", "type": "uint256"}]}, {"constant": true, "inputs": [{"name": "index", "type": "uint256"}], "name": "getInstructorCount", "outputs": [{"name": "count", "type": "uint256"}]}]

```

browser

config

browser/Courses.sol

Current version: 0.4.21+commit.dfe3193c.Emscripten.clang

Select new compiler version

Auto compile Hide warnings Start to compile (Ctrl-S)

Courses

Static Analysis raised 6 warning(s) that requires your attention. Click here to show the warnings.

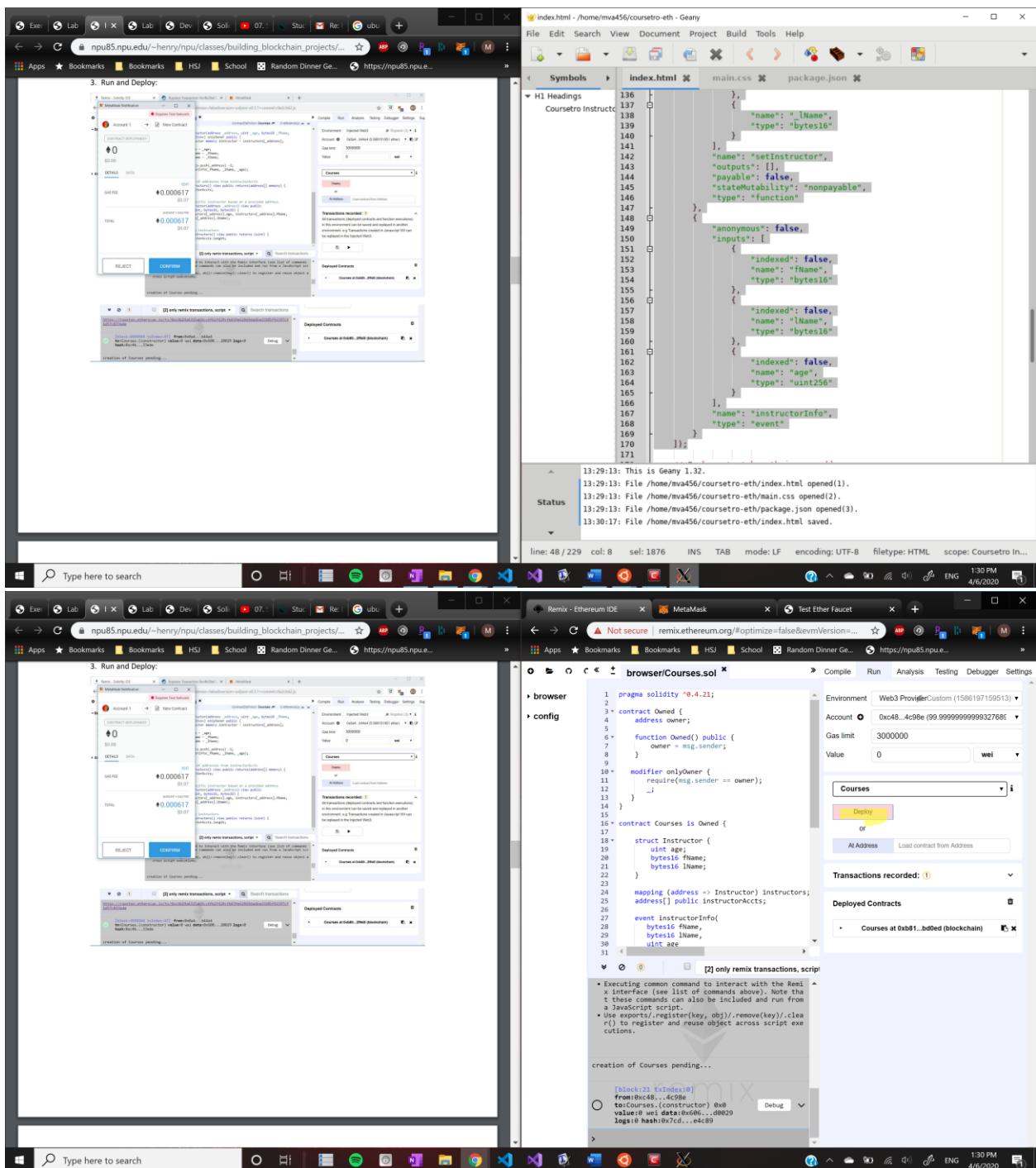
ABI

Bytecode

Owned

You can use this terminal for:

- Checking transactions details and start debugging.
- Running JavaScript scripts. The following libraries are accessible:
 - o web3 version 1.0.8
 - o ethUtil
 - o SafeMath
 - o compilers - contains currently loaded compiler
- Executing commands to interact with the Remix interface (see list of available commands). Note that these commands can be included and run from a JavaScript script:
 - o userContracts.register(key, obj).remove(key).clear() to register and reuse object across script executions.



4. Confirm the Transaction, and it will be successful:

5. Create an index.html:

```

pragma solidity ^0.4.21;
contract Owner {
    address owner;
    function() public {
        owner = msg.sender;
    }
}
modifier onlyOwner {
    require(msg.sender == owner);
}
contract Courses is Owned {
    struct Instructor {
        uint age;
        bytes16 fName;
        bytes16 lName;
    }
    mapping (address => Instructor) instructors;
    event InstructorInfo(
        bytes16 fName,
        bytes16 lName,
        uint age
    );
}

```

4. Confirm the Transaction, and it will be successful:

5. Create an index.html:

```
<!DOCTYPE html>
<html lang="en">
```

Remix - Ethereum IDE interface showing the Solidity code for the Courses contract. The code defines a struct Instructor with fields name, age, and address. It includes a modifier onlyOwner and a mapping from address to Instructor.

```
pragma solidity ^0.4.21;
contract Courses {
    struct Instructor {
        string name;
        uint age;
        bytes16 address;
    }
    modifier onlyOwner {
        require(msg.sender == owner);
    }
    function Owned() public {
        owner = msg.sender;
    }
    contract Courses is Owned {
        struct Instructor {
            string name;
            uint age;
            bytes16 address;
        }
        mapping (address => Instructor) instructors;
        event InstructorInfo(
            bytes16 name,
            bytes16 address,
            uint age
        );
        function register(string _name, uint _age, bytes16 _address) onlyOwner {
            Instructor memory instructor;
            instructor.name = _name;
            instructor.age = _age;
            instructor.address = _address;
            instructors[_address] = instructor;
            InstructorInfo(_name, _address, _age);
        }
    }
}
```

The Remix interface also shows a JavaScript script for registering an instructor:

```
use exports.register(key, obj).remove(key) to register and reuse object across contracts.
```

MetaMask extension interface showing the transaction confirmation. The transaction details are identical to the one shown in the browser's MetaMask extension. The transaction is confirmed with a status of "CONFIRMED".

8. Put main_lab5.css and all other files under the same directory:

```

"scripts": [
  "dev": "lite-server"
]
}

```

8. Put main_lab5.css and all other files under the same directory:

9. Run following code on command prompt:

```

npm init
npm install web3@0.20.6 --save
npm install lite-server --save-dev

```

10. Run code:

```

npm run dev

```

11. Run Remix - Ethereum IDE

Remix - Ethereum IDE browser/Courses.sol

```

pragma solidity ^0.4.21;
contract Courses {
    address owner;
    function Owned() public {
        owner = msg.sender;
    }
    modifier onlyOwner {
        require(msg.sender == owner);
    }
    contract Courses is Owned {
        struct Instructor {
            uint age;
            bytes16 fName;
            bytes16 lName;
            uint rate;
        }
        mapping (address => Instructor) instructors;
        address[] public instructorAccts;
        event InstructorInfo(
            bytes16 fName,
            bytes16 lName,
            uint age
        );
        creation of Course pending...
        https://ronanton.etherscan.io/tx/0xb1640295c60270a63d
        b017e263b59fc4c83f7bae77aafehez08c033e5
        [block:7866065, txIndex:1]
        from:0xc48...4c98e
        to:Courses.(constructor)
        value:0 wei data:0x606...d0e29
        logs:0 hash:0xb16...033e5
    }
}

```

Transactions recorded: Courses at 0x947...39415 (blockchain)

Deploy or At Address Load contract from Address

Deployed Contracts Courses at 0x947...39415 (blockchain)

[2] only remix transactions, script

creation of Course pending...

https://ronanton.etherscan.io/tx/0xb1640295c60270a63d
b017e263b59fc4c83f7bae77aafehez08c033e5

[block:7866065, txIndex:1]
from:0xc48...4c98e
to:Courses.(constructor)
value:0 wei data:0x606...d0e29
logs:0 hash:0xb16...033e5

Copy value to clipboard

File Edit Search View Document Project Build Tools Help

index.html /home/mva456/coursetro-eth - Geany

Symbols index.html main.css package.json

```

H1 Headings
Coursetro Instructor
163     "name": "age",
164     "type": "uint256"
165   ],
166   "name": "instructorInfo",
167   "type": "event"
168 }
169 ];
170 // Each contact has their own address
171 var Coursetro = CoursetroContract.at('0xb3d8ad5e0bffc7e609631521d8d5dd3ab9a30b0');
172 console.log('Creating Coursetro');
173 // The highlighted area should be customized for your own smart contract
174 var Coursetro = CoursetroContract.at('0xb3d8ad5e0bffc7e609631521d8d5dd3ab9a30b0');
175 console.log('Creating Coursetro');
176 // The highlighted area should be customized for your own smart contract
177 var Coursetro = CoursetroContract.at('0xb3d8ad5e0bffc7e609631521d8d5dd3ab9a30b0');
178 var instructorEvent = Coursetro.Instructor();
179 instructorEvent.watch(function(error, result){
180     if (!error)
181     {
182         $('#loader').hide();
183         $('#instructor').html(result.args.name + ' (' + result.args.age +
184             ' years old)');
185     }
186     else {
187         $('#loader').hide();
188         console.log(error);
189     }
190 });
191 /*
192 */
193 /*
194 */
195 /* Removed for Lab 4
13:29:13: This is Geany 1.32.
13:29:13: File /home/mva456/coursetro-eth/index.html opened(1).
13:29:13: File /home/mva456/coursetro-eth/main.css opened(2).
13:29:13: File /home/mva456/coursetro-eth/package.json opened(3).
13:30:17: File /home/mva456/coursetro-eth/index.html saved.

```

Status

line: 179 / 229 col: 84 sel: 0 INS TAB MOD mode: LF encoding: UTF-8 filetype: HTML scope: Coursetro...

The next line in our Javascript underneath the contract address is where we define a variable for the event. We need to make a slight change:

```
// Change this:  
var instructorEvent = Coursetro.Instructor();  
  
// To this:  
var instructorEvent = Coursetro.instructorInfo({}, 'latest');
```

The former line worked fine in the `testrpc` environment, but I found that I had to pass in an empty object in the first argument, and a `'latest'` string in the second, in order for it to work on the Ropsten network.

This is simply informing the event that we only want the `latest` event when an instructor has been added.

We also need to change the `.watch()` function associated with that event to:

```
instructorEvent.watch(function (err, result) {  
    if (!err) {  
        if (result.blockHash != $("#instrans").html())  
            $("#loader").hide();  
  
        $("#instrans").html('Block hash: ' + result.blockHash);  
        $("#instructor").html(web3.toAscii(result.args.fName) + ' ' + web3.toAscii(result.args.lName) +  
        } else {  
            $("#loader").hide();  
        }  
    }  
});
```

First, we're checking if the current `*.blockHash*` is not equal to the blockHash defined in the `#instrans` ID. If it's not, then and only then will we hide the loading graphic.

Next, we're using a new function called `toAscii`, this is because the names are now `bytes` types, which does not return the actual string value, `toAscii` reverts it back.

Underneath this code, let's add a new section that will give us a count on our instructors:

```
Coursetro.countInstructors((err, res) => {  
    if (res)  
        $("#countIns").html(res.c + ' Instructors');  
});
```

Then, let's update the click event to work with the new function in the smart contract:

```
$("#button").click(function() {
```

First, we're checking if the current `*.blockHash*` is not equal to the `blockHash` defined in the `#intrans` ID. If it's not, then only then will we hide the loading graphic.

Next, we're using a new function called `.toAscii`, this is because the names are now `bytes` types, which does not return the actual string value. `.toAscii` reverts it back.

Underneath this code, let's add a new section that will give us a count on our instructors:

```

coursestro.countInstructors((err, res) => {
  if (res)
    $("#countIns").html(res.c + ' Instructors');
});

```

Then, let's update the click event to work with the new function in the smart contract:

```

$("#button").click(function() {
  ...
  coursestro.setInstructor(web3.eth.defaultAccount, $("#age").val(), $("#fName").val(), $("#lName").val());
  if (err)
    $("#loader").hide();
});

```

And that's it!

Conclusion

In the next and final lesson that's a part of this course, we're going to interact with this contract on the Ropsten Test Network.

Is this OK? (yes)

```

npm update check failed
Try running with sudo on get access
to the local update config store via
sudo chown -R $USER:(id -gn $USER) /home/mva456/.config

```

mva456@DESKTOP-OE7HLB3:~/coursestro-eth\$ npm install web3@0.20.6 --save
npm WARN coursestro-eth@1.0.0 No description
npm WARN coursestro-eth@1.0.0 No repository field.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.12 (node_modules/fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.12: wanted {"os": "darwin", "arch": "any"} (current: {"os": "linux", "arch": "x64"})
+ web3@0.20.6
updated 1 package and audited 16727 packages in 7.507s

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

found 3 low severity vulnerabilities
 run 'npm audit fix' to fix them, or 'npm audit' for details

```

npm update check failed
Try running with sudo on get access
to the local update config store via
sudo chown -R $USER:(id -gn $USER) /home/mva456/.config

```

mva456@DESKTOP-OE7HLB3:~/coursestro-eth\$ npm install lite-server --save-dev
npm WARN coursestro-eth@1.0.0 No description
npm WARN coursestro-eth@1.0.0 No repository field.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.12 (node_modules/fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.12: wanted {"os": "darwin", "arch": "any"} (current: {"os": "linux", "arch": "x64"})
+ lite-server@2.5.4
updated 1 package and audited 16727 packages in 4.673s

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

found 3 low severity vulnerabilities
 run 'npm audit fix' to fix them, or 'npm audit' for details

```

npm update check failed
Try running with sudo on get access
to the local update config store via
sudo chown -R $USER:(id -gn $USER) /home/mva456/.config

```

mva456@DESKTOP-OE7HLB3:~/coursestro-eth\$ npm run dev

Type here to search

Document

Coursetro Instructor

0 Instructors

First Name

Whoever

Last Name

Whatever

Last Name

50

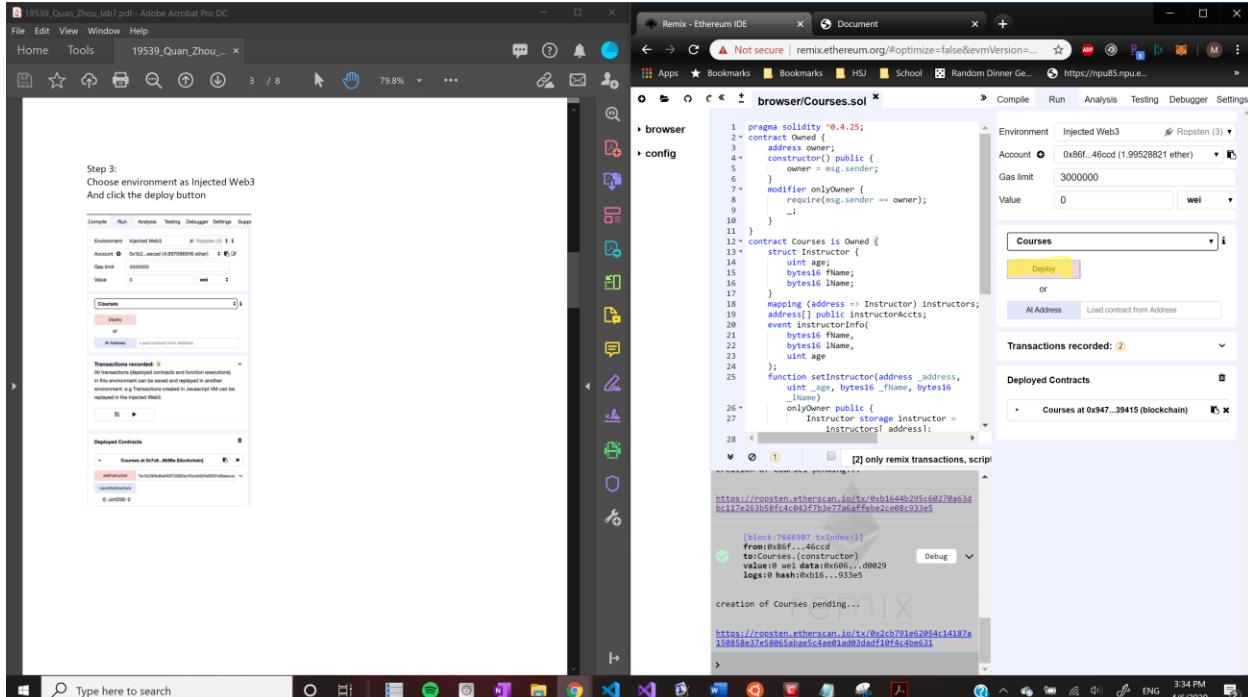
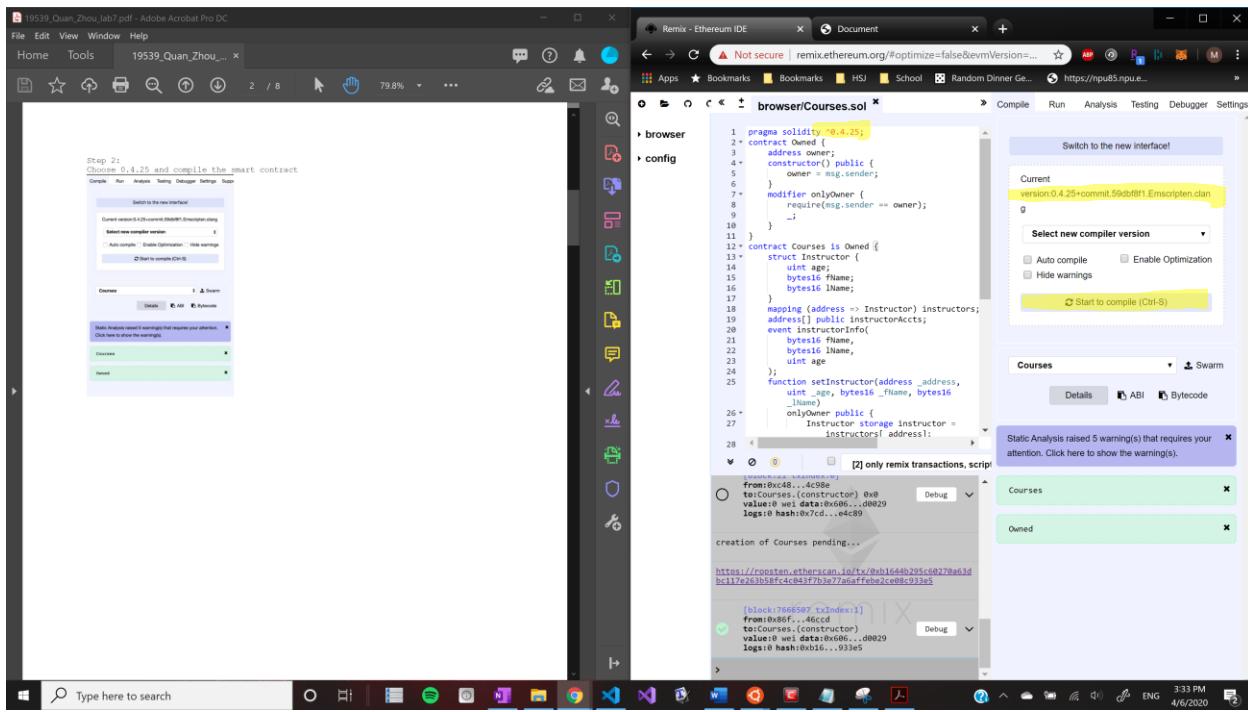
Update Instructor

DevTools failed to parse SourceMap: chrome-extension://nkbihfbeogaeahfklodhfpklnmjejjmca/contentscript.js.map

DevTools failed to parse SourceMap: chrome-extension://nkbihfbeogaeahfklodhfpklnmjejjmca/contentscript.js.map

Uncaught Error: image.js:1 invalid address at c (image.js:1) at InputTransactionFormatter (image.js:1) at image.js:1 at Array.map (anonymous) at o.formatInput (image.js:1) at o.toPayload (image.js:1) at w.o [sendTransaction] (image.js:1) at u.sendTransaction (image.js:1) at u.execute (image.js:1) at HTMLButtonElement.<anonymous> ((index):214)

Solution:



Step 6: fire up your server by using
npm run dev
In your terminal
And go to your webpage:
Right click on the page and go to inspect

```
// Default account should be accounts[0]
// web3.eth.defaultAccount = web3.eth.accounts[0];
// web3.eth.defaultAccount = web3.eth.accounts[0];
// web3.eth.defaultAccount = web3.eth.accounts[0];
// The following highlighted area must be converted into one line.
// web3.eth.defaultAccount = web3.eth.accounts[0]; // PASTE ABI CODE HERE!
var CoursestroContract = web3.eth.contract();

console.log("Created CoursestroContract");
// var Coursestro = CoursestroContract.at('PASTE CONTRACT ADDRESS HERE');
console.log("Creating Coursestro");
// Coursestro.setInstructorCount();
// The following highlighted area must be converted into one line.
// Coursestro.setInstructorCount();
var Coursestro = CoursestroContract.at();
console.log(Coursestro);

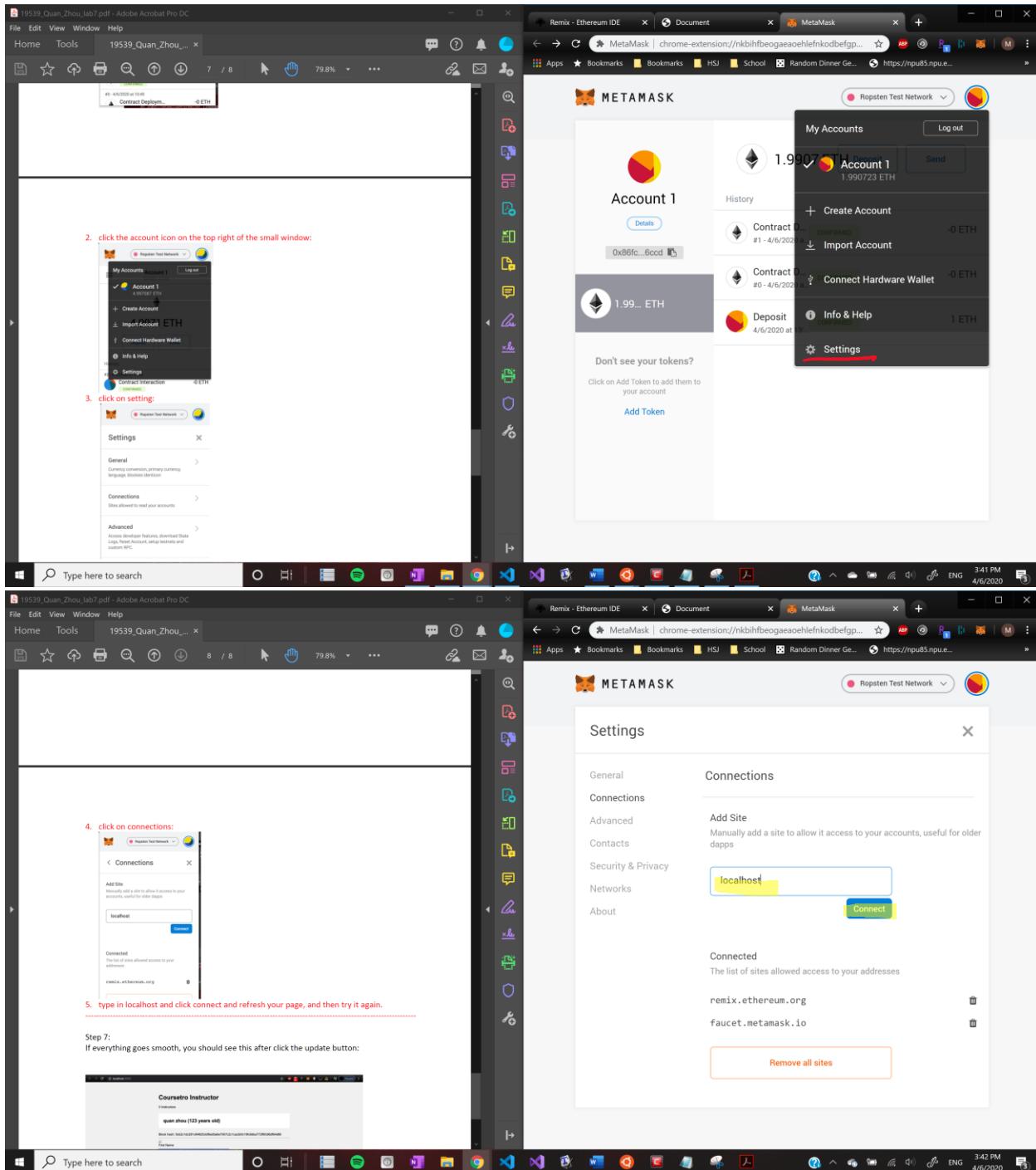
// Replace the Coursestro.getInstructor() lines with this line:
// var instructorEvent = Coursestro.Instructor();
var instructorEvent = Coursestro.instructorInfo({ latest });
// Watch for event
instructorEvent.watch(function(error, result) {
    if (result) {
        if (result.blockHash != $("#insTrans").html()) {
            $("#insTrans").html("Block hash: " + result.blockHash);
            $("#instructor").html(web3.toHex(result.args.fName) + " " +
                result.args.lName + " " + result.args.age + " years old");
        } else {
            $("#loader").hide();
        }
    }
});
```

```
Coursestro.countInstructors((err, res) => {
    if (res)
        $("#countIns").html(res.c + " Instructors");
})

// If the button "Update Instructor" is pressed.
$("#button").click(function () {
    $("#loader").show();
    web3.eth.defaultAccount();
    Coursestro.setInstructor(web3.eth.defaultAccount, $("#age").val(),
        $("#fName").val(), $("#lName").val(), (err, res) => {
            if (err)
                $("#loader").hide();
        }
    );
});
```

```
Coursestro.countInstructors((err, res) => {
    if (res)
        $("#countIns").html(res.c + ' Instructors');
});

$("#button").click(function () {
    $("#loader").show();
    console.log(web3.eth.defaultAccount);
    web3.eth.defaultAccount($("#fName").val(), $("#lName").val(), (err, res) => {
        if (err)
            $("#loader").hide();
    });
});
```



19539.Quan.Zhou_lab7.pdf - Adobe Acrobat Pro DC

File Edit View Window Help

Home Tools 19539_Quan_Zhou... x

Add Site

localhost

Connected

Connected to this allowed access to your address(es):

remix.ethereum.org

5. type in localhost and click connect and refresh your page, and then try it again.

Step 7:
If everything goes smooth, you should see this after click the update button:

Coursetro Instructor

0 Instructors

First Name

Last Name

Last Name

Update Instructor

Remix - Ethereum IDE x Document x MetaMask x

localhost:3000

Apps Bookmarks Bookmarks HSJ School Random Dinner Ge... https://npu85.npu.e...

Console

```

⚠ A cookie associated localhost:3000 with a cross-site resource at http://glify.com/ was set without the SameSite attribute. A future release of Chrome will only deliver cookies with cross-site requests if they are set with SameSite=None and Secure. You can review cookies in developer tools under Application>Storage>Cookies and see more details at https://www.chromestatus.com/feature/5633521622188832
⚠ DevTools failed to parse SourceMap: chrome-extension://nkbihfbeogaeoiefnklnbohbglnnnourcemaps/contentscript.js.map
⚠ DevTools failed to parse SourceMap: chrome-extension://nkbihfbeogaeoiefnklnbohbglnnnourcemaps/contentscript.js.map
created (index):181
CoursetroContract
Creating Coursetro (index):182
(index):188
p _eth: w, transactionHash: nu
ll, address:
> "0x947b57d59fae2809fc74ce9728
  , abi: Array(8), getInstructor:
    f,
  null
  {
    image: $i1
  > "0x86fcccc083c01b20d3ad0cd2ab22d6
  }

```

Type here to search

MetaMask Notification Ropsten Test Network

Account 1 0x947b...9415

CONTRACT INTERACTION

DETAILS DATA

GAS FEE ♦ 0.0001656 No Conversion Rate Available

AMOUNT + GAS FEE ♦ 0.001656 See this after click the update button:

TOTAL ♦ 0.001656 No Conversion Rate Available

Reject Confirm

Coursetro Instructor

0 Instructors

First Name

Last Name

Last Name

50

Update Instructor

Remix - Ethereum IDE x Document x MetaMask x

localhost:3000

Apps Bookmarks Bookmarks HSJ School Random Dinner Ge... https://npu85.npu.e...

Console

```

⚠ A cookie associated localhost:3000 with a cross-site resource at http://glify.com/ was set without the SameSite attribute. A future release of Chrome will only deliver cookies with cross-site requests if they are set with SameSite=None and Secure. You can review cookies in developer tools under Application>Storage>Cookies and see more details at https://www.chromestatus.com/feature/5633521622188832
⚠ DevTools failed to parse SourceMap: chrome-extension://nkbihfbeogaeoiefnklnbohbglnnnourcemaps/contentscript.js.map
⚠ DevTools failed to parse SourceMap: chrome-extension://nkbihfbeogaeoiefnklnbohbglnnnourcemaps/contentscript.js.map
created (index):181
CoursetroContract
Creating Coursetro (index):182
(index):188
p _eth: w, transactionHash: nu
ll, address:
> "0x947b57d59fae2809fc74ce9728
  , abi: Array(8), getInstructor:
    f,
  null
  {
    image: $i1
  > "0x86fcccc083c01b20d3ad0cd2ab22d6
  }
  0x86fcccc083c01b20d3ad0cd2ab22d6 (index):211
  3ad8cd2ab22d6c09e46cc

```

Type here to search

The screenshot shows a Windows desktop environment with two browser windows open. The left window is a web browser displaying a local development site for 'Coursetro Instructor'. It has a form with fields for 'First Name' (Whoever), 'Last Name' (Whatever), and 'Age' (50). Below the form is a button labeled 'Update Instructor'. The right window is a Remix - Ethereum IDE browser extension, showing a transaction history and a confirmation message. The taskbar at the bottom shows various pinned icons and the system tray.

5. type in localhost and click connect and refresh your page, and then try it again.

Step 7:
If everything goes smooth, you should see this after click the update button:

Coursetro Instructor

First Name: Whoever

Last Name: Whatever

Age: 50

Update Instructor

Confirmed transaction
Transaction 2 confirmed! View on Etherscan Google Chrome