Creating Ethereum Smart contract Events-Lab4

Name: Priyanka, stu-id: 20179

Create index_lab4.html

```html
1   <!DOCTYPE html>
2   <html lang="en">
3   <head>
4       <meta charset="UTF-8" />
5       <meta name="viewport" content="width=device-width, initial-scale=1.0" />
6       <meta http-equiv="X-UA-Compatible" content="ie=edge" />
7       <title>Document</title>
8       <link rel="stylesheet" type="text/css" href="main_lab4.css" />
9       <script src="./node_modules/web3/dist/web3.min.js"></script>
10  </head>
11  <body>
12      <div class="container">
13          <h1>Coursetro Instructor</h1>
14          <h2 id="instructor">
15              <!-- // ADDED -->
16              <img id="loader" src="Imgur.gif" />
17          </h2>
18          <label for="name" class="col-lg-2 control-label">Instructor Name</label>
19          <input id="name" type="text" />
20          <label for="name" class="col-lg-2 control-label">Instructor Age</label>
21          <input id="age" type="text" />
22          <button id="button">Update Instructor</button>
23      </div>
24
25      <script src="https://code.jquery.com/jquery-3.2.1.slim.min.js"></script>
26      <script>
27          const run = async () => {
28              var web3;
29
30              if (typeof web3 !== "undefined") {
31                  web3 = new Web3(web3.currentProvider);
32              } else {
33                  /////////////////////////////////////////////////////////////
34                  // CHANGED: Using Websocket Provider
35                  web3 = new Web3(new Web3.providers.WebsocketProvider("ws://localhost:8545"));
36                  /////////////////////////////////////////////////////////////
37              }
```

```javascript
const run = async () => {

        web3 = new Web3(new Web3.providers.WebsocketProvider("ws://localhost:8545"))
        ////////////////////////////////////////////////////////////
    }


    const accounts = await web3.eth.getAccounts();
    web3.eth.defaultAccount = accounts[0];
    console.log(web3.eth.defaultAccount);
    console.log("Creating Coursetro");


    ////////////////////////////////////////////////////////////////
    // The highlighted area should be merged into one line
    ////////////////////////////////////////////////////////////////
    var Coursetro = new web3.eth.Contract(
        [
{
    "constant": false,
    "inputs": [
        {
            "name": "_fName",
            "type": "string"
        },
        {
            "name": "_age",
            "type": "uint256"
        }
    ],
    "name": "setInstructor",
    "outputs": [],
    "payable": false,
    "stateMutability": "nonpayable",
    "type": "function"
},
{
```

```json
        },
        {
            "constant": true,
            "inputs": [],
            "name": "getInstructor",
            "outputs": [
                {
                    "name": "",
                    "type": "string"
                },
                {
                    "name": "",
                    "type": "uint256"
                }
            ],
            "payable": false,
            "stateMutability": "view",
            "type": "function"
        },
        {
            "inputs": [],
            "payable": false,
            "stateMutability": "nonpayable",
            "type": "constructor"
        },
        {
            "anonymous": false,
            "inputs": [
                {
                    "indexed": false,
                    "name": "name",
                    "type": "string"
```

```json
        "type": "string"
    },
    {
        "indexed": false,
        "name": "age",
        "type": "uint256"
    }
],
"name": "Instructor",
"type": "event"
}
,
```

```javascript
        "0x67043947CA342Dc188171ce9a4C828A4EF7E97F2"
    );

    ////////////////////////////////////////////////////////////
    // CHANGED: using event listener
    ////////////////////////////////////////////////////////////
    Coursetro.events
        .Instructor()
        .on("connected", function (subscriptionId) {
            console.log(subscriptionId);
        })
        .on("data", function (event, error) {
            console.log("Inside instructorEvent.on");
            console.log(event);
            $("#loader").hide();
            $("#instructor").html(
                event.returnValues.name +
                " (" +
                event.returnValues.age +
                " years old)"
```

```javascript
                })
                .on("data", function (event, error) {
                    console.log("Inside instructorEvent.on");
                    console.log(event);
                    $("#loader").hide();
                    $("#instructor").html(
                        event.returnValues.name +
                        " (" +
                        event.returnValues.age +
                        " years old)"
                    );
                })
                .on("error", function (error) {I
                    $("#loader").hide();
                    console.error(error);
                });

            $("#button").click(function () {
                console.log("Inside click");
                // ADDED
                $("#loader").show();
                Coursetro.methods
                    .setInstructor($("#name").val(), $("#age").val())
                    .send({ from: "0x409BB479dA25c1642C1A2765500fF789920e3c88" })
            });
        };
I
        run();
    </script>
</body>
</html>
```

Create main_lab4.css

```css
body {
    background-color: □#f0f0f0;
    padding: 2em;
    font-family: "Raleway", "Source Sans Pro", "Arial";
    }
    .container {
    width: 50%;
    margin: 0 auto;
    }
    label {
    display: block;
    margin-bottom: 10px;
    }
    input {
    padding: 10px;
    width: 50%;
    margin-bottom: 1em;
    }
    button {
    margin: 2em 0;
    padding: 1em 4em;
    display: block;
    }
    #instructor {
    padding: 1em;
    background-color: □#fff;
    margin: 1em 0;
    }
    #loader {
    width: 100px;
    display: none;
    }
```

Create package.json

<> index_lab3.html   <> index_lab4.htm

```json
{} package.json > ...
1    {
2      "name": "lab4",
3      "version": "1.0.0",
4      "main": "index.js",
5      "license": "MIT",
6      "dependencies": {
7      "web3": "^1.7.4"
8      }
9      }
10     |
```

https://imgur.com/EQQLMVh

lab4.sol

```solidity
1    pragma solidity ^0.4.18;
2
3    contract Coursetro {
4        string fName;
5        uint age;
6
7        // Constructor to initialize default values
8        constructor()public {        undefined gas
9            fName = "gary";
10           age = 34;
11       }
12       event Instructor(
13           string name,
14           uint age
15       );
16
17       // Function to set instructor details
18       function setInstructor(string memory _fName, uint _age) public {        infi
19           fName = _fName;
20           age = _age;
21           emit Instructor(_fName, _age);
22
23       }
24
25       // Function to get instructor details
26       function getInstructor() public constant returns (string memory, uint) {
27           return (fName, age);
28       }
29   }
```

Open REMIX IDE compile and deploy it, copy ABI code, copy account address and copy contract address, update code above.

Open index_lab4.html Typing information in input, the values will update automatically.

Coursetro Instructor

Instructor Name

Instructor Age

Update Instructor

Coursetro Instructor

Instructor Name

Priyanka

Instructor Age

20179

Update Instructor

Go to REMIX to check it out