

## Lab 6: Solidity Mappings & Structs Tutorial

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Step 1 & Step 2 & Step 3 & Step 4 & Step 5: Creating a Struct &











Mapping, Add & Get & Count from Mapping

Go to Remix Ethereum IDE at <http://remix.ethereum.org> and create smart contract called lab6.sol


final lab6.sol content

```
1  pragma solidity ^0.4.18;
2
3  contract Coursetro {
4      struct Instructor {
5          uint age;
6          string fName;
7          string lName;
8      }
9      // Mapping Instructor struct to an Ethereum address.
10     mapping (address => Instructor) instructors;
11     address[] public instructorAccts;
12     function addInstructor(uint _age, string memory _fName, string memory _lName) public {
13         Inst _inst = Instructor({age: _age, fName: _fName, lName: _lName});
14         instructors[_address] = _inst;
15         instructorAccts.push(_address);
16     }
17     // Return a list of addresses from instructorAccts
18     function getInstructors() view public returns (address[] memory) {
19         return instructorAccts;
20     }
21     // Retrieve a specific instructor based on a provided address
22     function getInstructor(address _address) view public returns (uint, string memory, string memory) {
23         return (instructors[_address].age, instructors[_address].fName, instructors[_address].lName);
24     }
25     // Count how many instructors
26     function countInstructors() view public returns (uint) {
27         return instructorAccts.length;
28     }
```

compile and deploy the contract



DEPLOY & RUN  
TRANSACTIONS

✓ > 

CONTRACT

Coursetro - lab6.sol

evm version: byzantium

Deploy

☐ Publish to IPFS

At Address

Load contract from Address

Transactions recorded 


1

i

 >




Deployed Contracts 

1



▼

COURSETRO AT 0X458...8B887

Balance: 0 ETH

setInstructor

address\_address, uint256

▼

countInstruct...

getInstructor

address\_address

▼

getInstructors

getInstructors - call

instructorAccts

uint256

▼

Low level interactions 

i

CALL DATA

test the methods like this, the account address was chose from the ganache available accounts when you start the RPC server

## TRANSACTIONS

▼

COURSEIRO AI 0X458...8B88

4

X

Balance: 0 ETH

setInstructor

^

\_address:

0x51bCB21245C17412DdAc7c2

\_age:

25

\_fName:

Priyanka

\_lName:

Pari

Calldata

Parameters

transact

countInstruct...

0: uint256: 1

getInstructor

address \_address

▼

0: uint256: 25

1: string: Priyanka

2: string: Pari

getInstructors

0: address[]: 0x51bCB21245C17412DdAc7c28188A829dAc2dAe5e

instructorAccts

uint256

▼

Low level interactions

i

CALLDATA

Transact