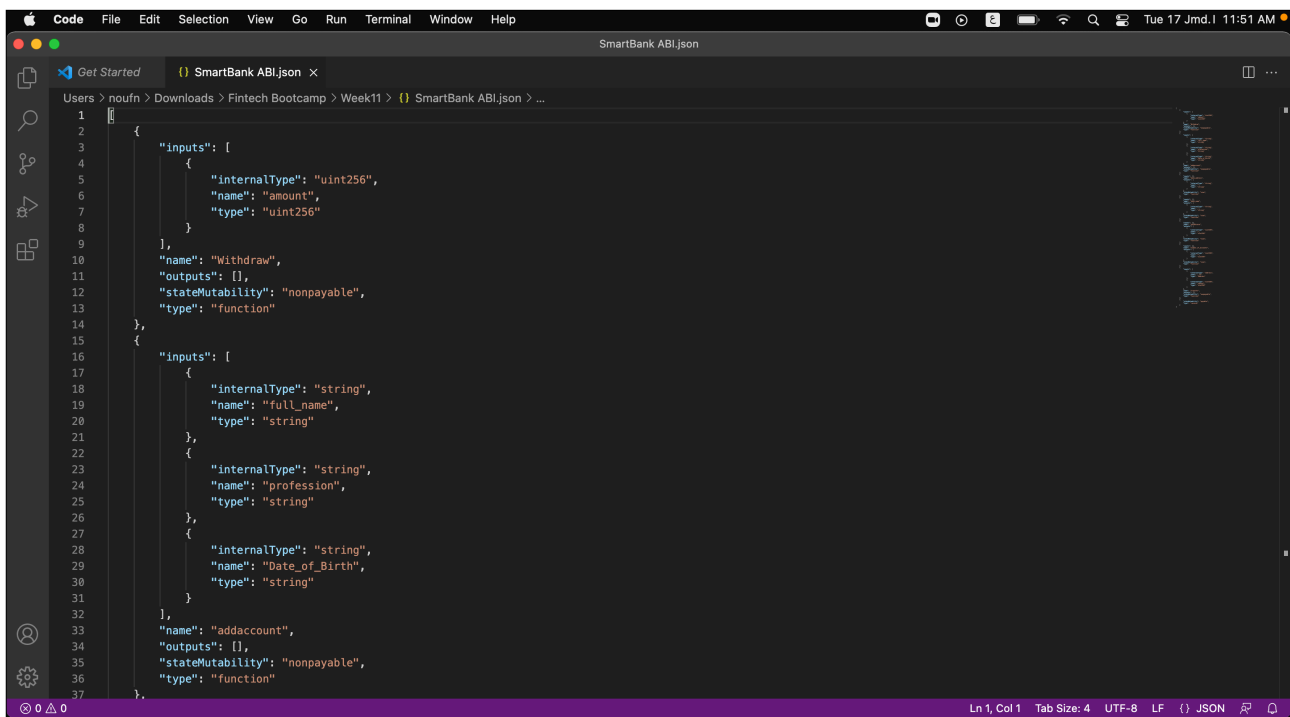
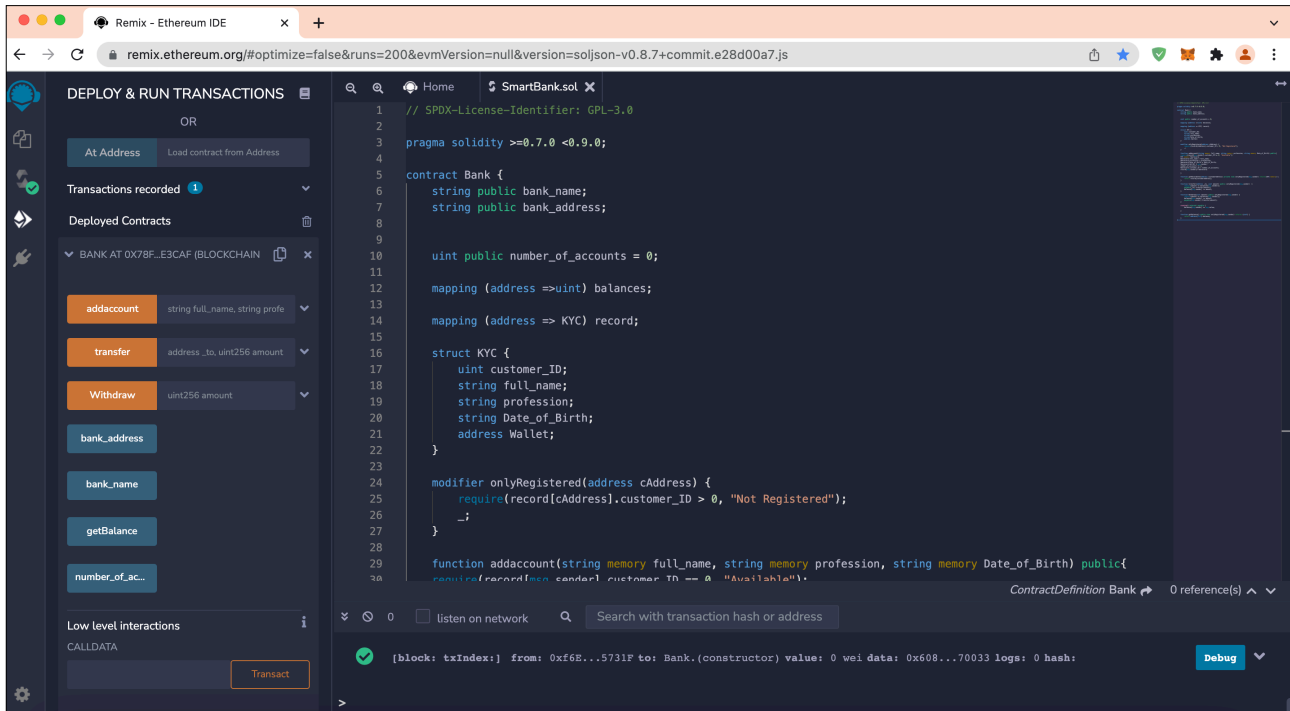


NOUF ALMEKAWED

Part 1: Preparing a Smart Contract for our dApp



- Test it out a bit in Ganache

The screenshot displays the Remix IDE interface, which is used for developing and testing smart contracts. The interface is divided into several panels:

- Left Panel (Deploy & Run Transactions):** This panel contains settings for the deployment environment. It includes a dropdown for "Web3 Provider" (set to "Custom (5777) network"), an "ACCOUNT" field showing the address "0xf06...AC829 (99.9819057)", a "GAS LIMIT" of "3000000", a "VALUE" of "0 Wei", and a "CONTRACT" dropdown set to "Bank - SmartBank.sol". There are buttons for "Deploy", "Publish to IPFS", and "At Address".
- Center Panel (Code Editor):** This panel shows the Solidity code for the "SmartBank.sol" contract. The code includes a pragma statement for Solidity version, a contract definition for "Bank", and a "KYC" struct. The code is as follows:

```
1 // SPDX-License-Identifier: GPL-3.0
2
3 pragma solidity >=0.7.0 <=0.9.0;
4
5 contract Bank {
6     string public bank_name;
7     string public bank_address;
8
9
10     uint public number_of_accounts = 0;
11
12     mapping (address =>uint) balances;
13
14     mapping (address => KYC) record;
15
16     struct KYC {
17         uint customer_ID;
18         string full_name;
19         string profession;
20         string Date_of_Birth;
21         address Wallet;
22     }
23
24     modifier onlyRegistered(address cAddress) {
25         require(record[cAddress].customer_ID > 0, "Not Registered");
26         _;
27     }
28 }
```
- Bottom Panel (Transactions and Debug Console):** This panel shows the results of the deployment. It includes a "Transactions recorded" section with a count of 1, and a "Deployed Contracts" section showing the contract "BANK AT 0X18F...24AD8 (BLOCKCHAIN)". Below this, there is a "Debug Console" showing the execution of the constructor with the following message: "[block:7 txIndex:0] from: 0xf06...AC829 to: Bank.(constructor) value: 0 wei data: 0x608...70033 logs: 0 hash: 0x9ea...a456e". A "Debug" button is also present.