National College of Ireland

Configuration Manual

MSc Research Project
FinTech

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MSc Project Submission Sheet

School of Computing

Student Name:	Roshan Ramchandran
Student ID:	X18120245
Programme:	MSc in FinTech **Year:** 2019
Module:	Research Project
Supervisor:	Noel Cosgrave
Submission Due Date:	12/08/2019
Project Title:	Utilisation of Blockchain Technology for KYC process for banks in India using Aadhar Number
Word Count:	369 **Page Count** 6

I hereby certify that the information contained in this (my submission) is information pertaining to research I conducted for this project. All information other than my own contribution will be fully referenced and listed in the relevant bibliography section at the rear of the project.
ALL internet material must be referenced in the bibliography section. Students are required to use the Referencing Standard specified in the report template. To use other author's written or electronic work is illegal (plagiarism) and may result in disciplinary action.

Signature: .....

Date: .....

PLEASE READ THE FOLLOWING INSTRUCTIONS AND CHECKLIST

Attach a completed copy of this sheet to each project (including multiple copies)	□
Attach a Moodle submission receipt of the online project submission, to each project (including multiple copies).	□
You must ensure that you retain a HARD COPY of the project, both for your own reference and in case a project is lost or mislaid. It is not sufficient to keep a copy on computer.	□

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Configuration Manual

Roshan Ramchandran
X18120245

1 Hardware Configuration

The configuration of hardware used in this research – Intel core i7 processor with 8GB RAM.

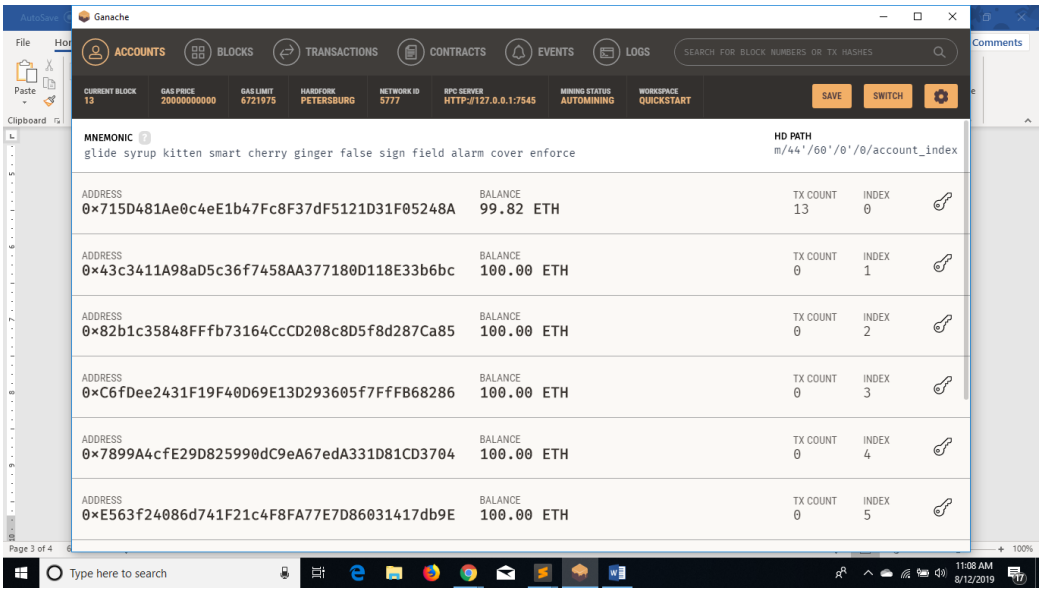
2 Software Configuration

2.1 Software required

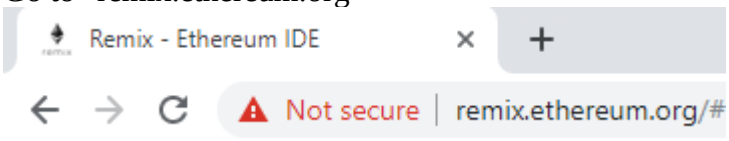
1) Google Chrome (Any recent Version)
2) Solidity v0.4.24
3) Ganache v2.1.0
4) Remix IDE
5) Metamask (Google Chrome Extension)
6) Web3 v0.20.7
7) Notepad++ v7.5.8
8) HTML5
9) CSS5
10) JavaScript

3 Steps for implementation of code

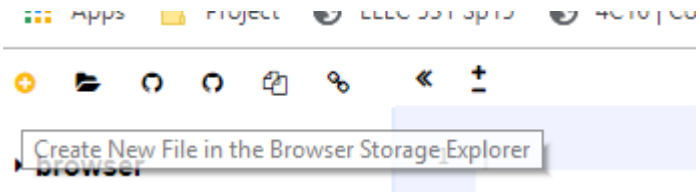
1) Create an account on chrome extension of Metamask.
2) Run Ganache application.



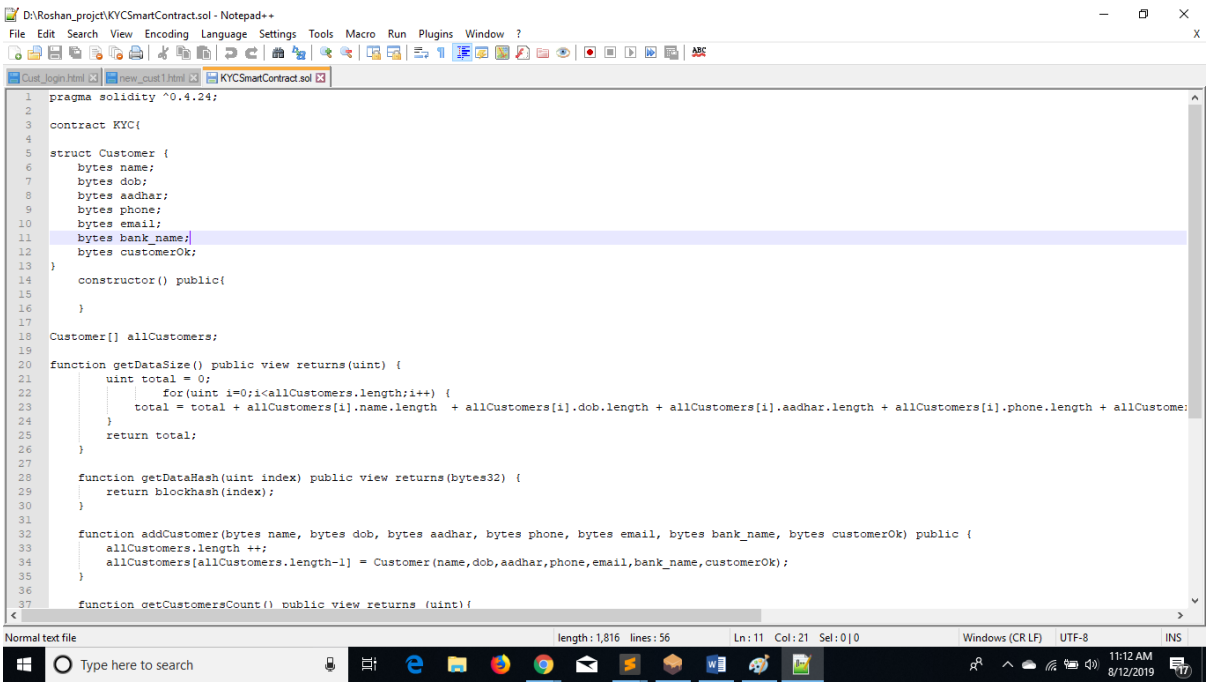
3) Go to “remix.ethereum.org”



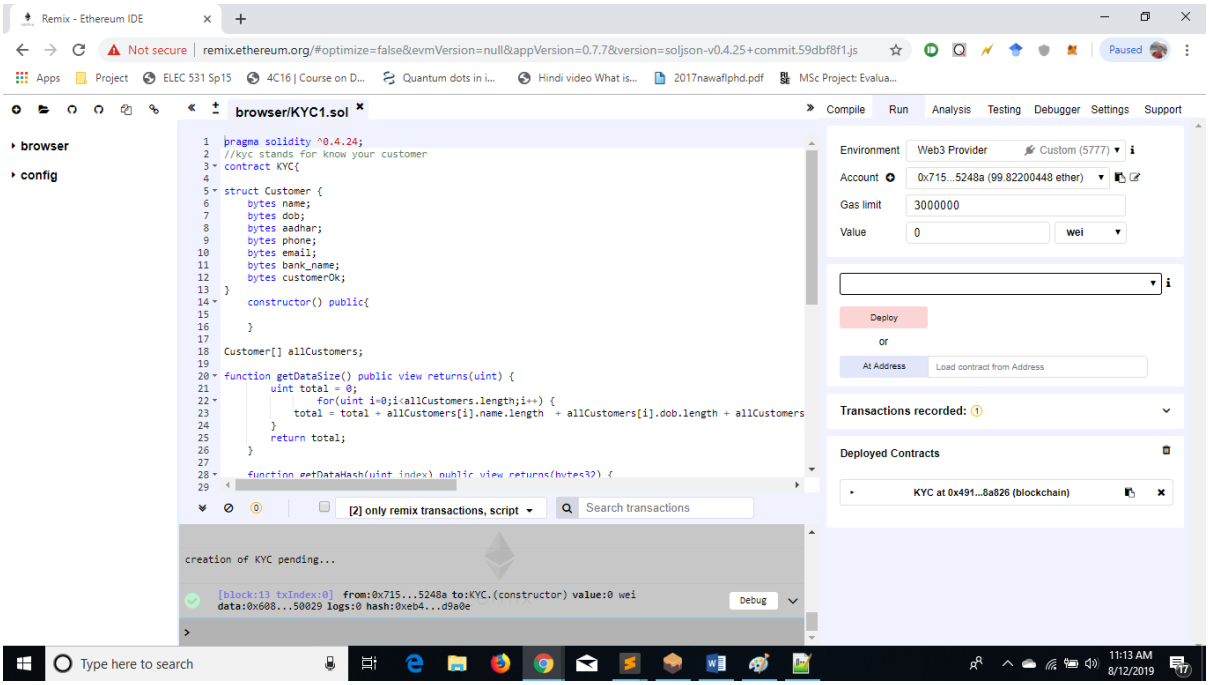
4) Create a new file in Remix.



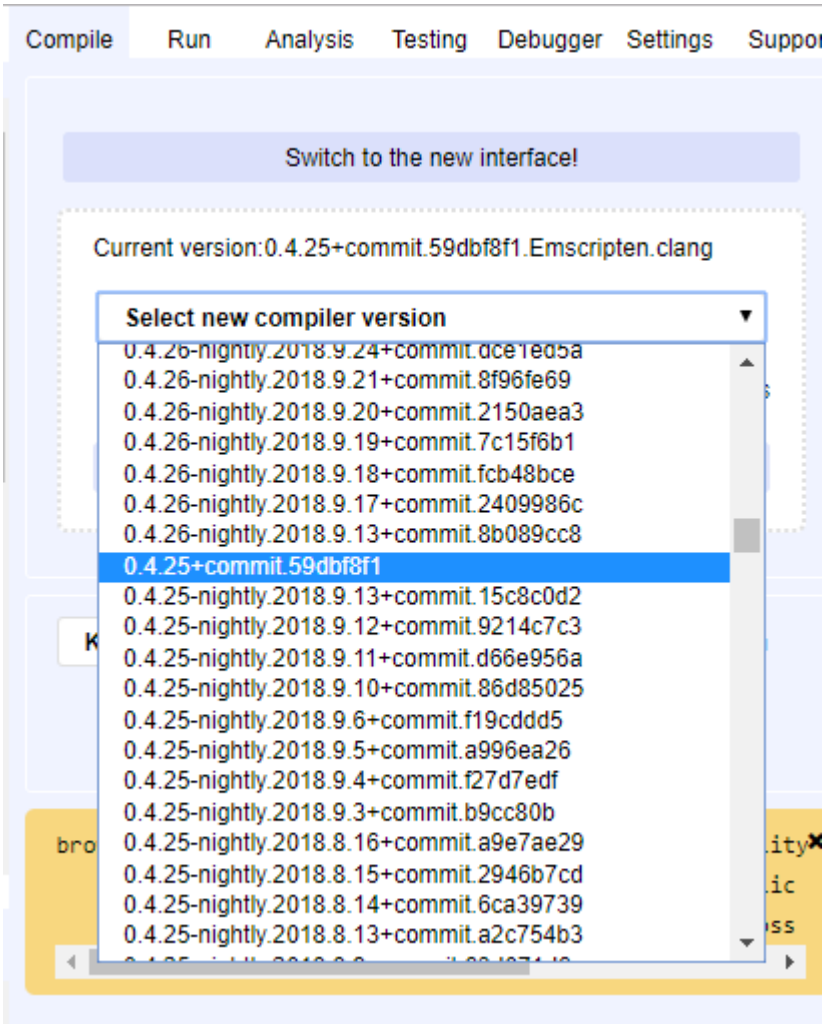
5) Open the file “KYCSmartContract.sol” from the folder using Notepad++.



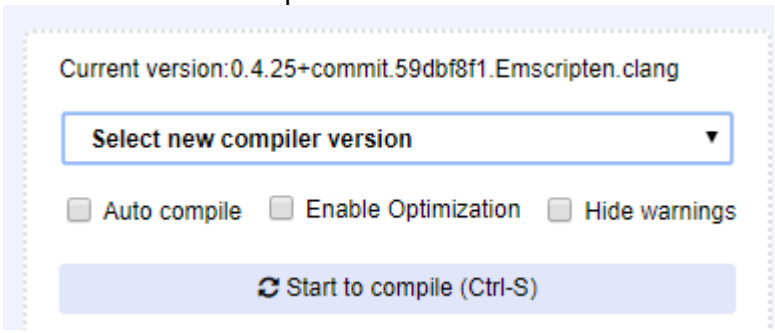
6) Copy the entire code from the file to new file in Remix.



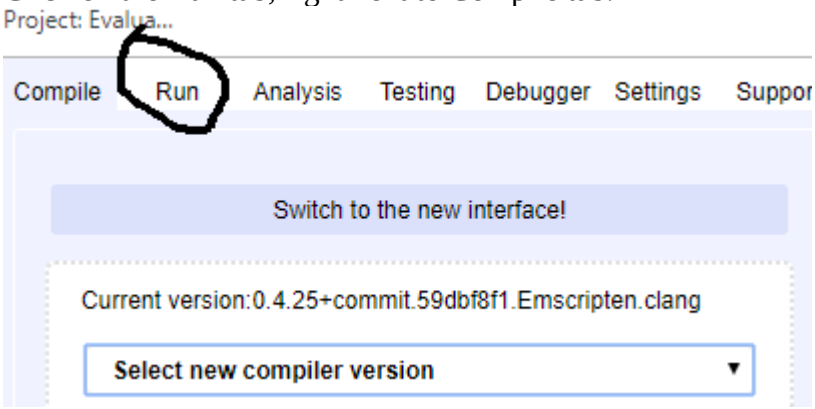
7) Set the compiler version from the dropdown menu to "0.4.25+commit59dbf8f1.Emscripten.clang"



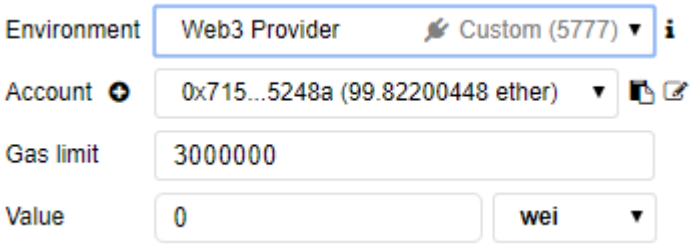
8) Click on Start to Compile.



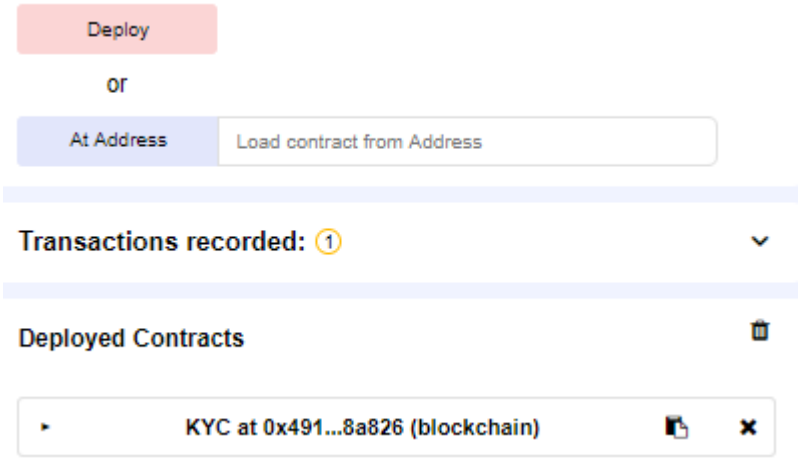
9) Click on the Run tab, right next to Compile tab.



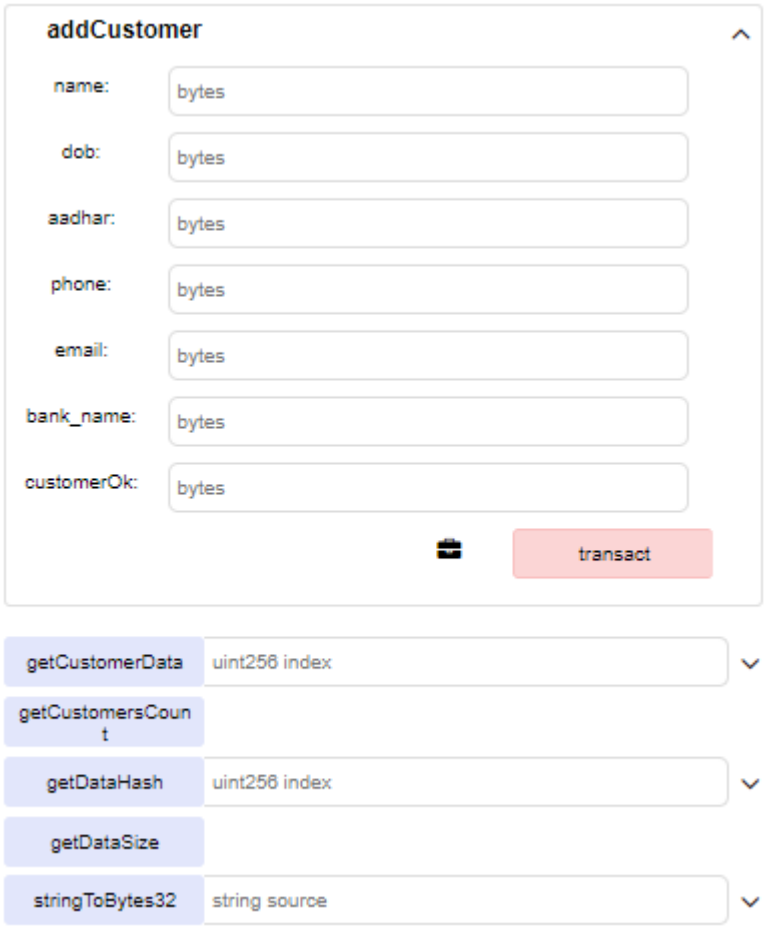
10) In the environment column in Run tab, selected Web3 Provider. The click on "OK" and then change the port number of localhost from '8545' to '7545' and then click on "OK".



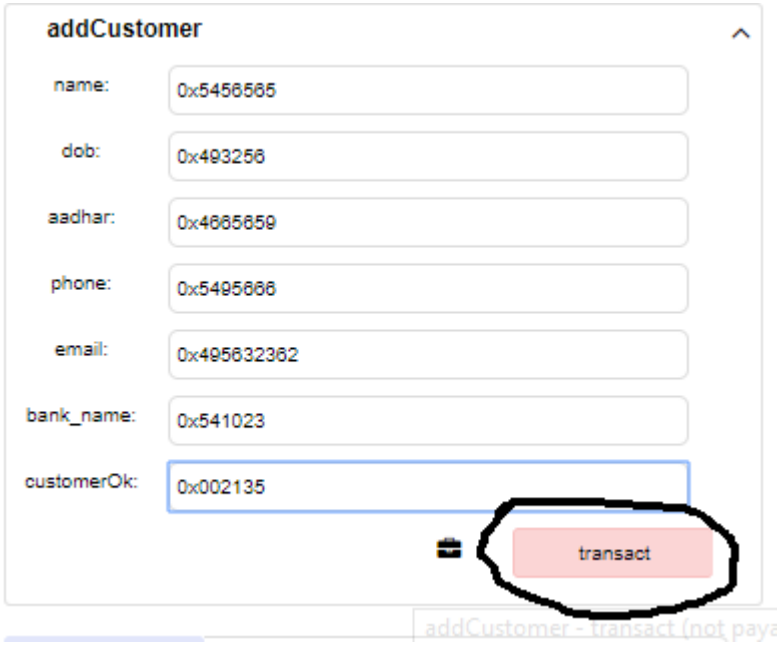
11) Click on Deploy. You will see that in "Deployed Contracts" section, KYC contract has been deployed on the blockchain and the details of that transaction can be seen on the left side of it in a grey box.



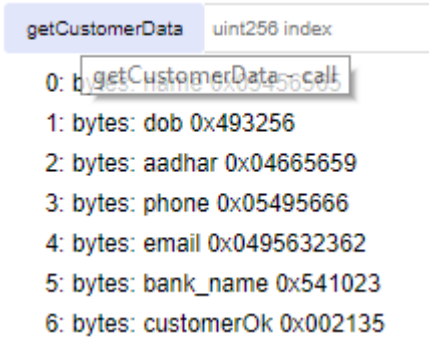
12) When you click on the small arrow on the contract button, you will see details about the variables in contract both input and output:



13) You will have to enter the values in the fields under “addCustomer”. The data-type accepted here is ‘bytes’, which takes input as 0x00000 for each entry. However, in front-end, the customer will enter a string and it will be converted to bytes in the smart contract. Once the values are entered, click on “transact” and the values will be stored on the blockchain and the transaction is also recorded.



14) You will get the customer data which you just entered when you click on the "getCustomerData" button.



15) This data is now stored on the blockchain.
16) You can also run the same code on the client side using the index.html file. However, there has been some issues regarding the web3 js while implementing the code on html and JavaScript.