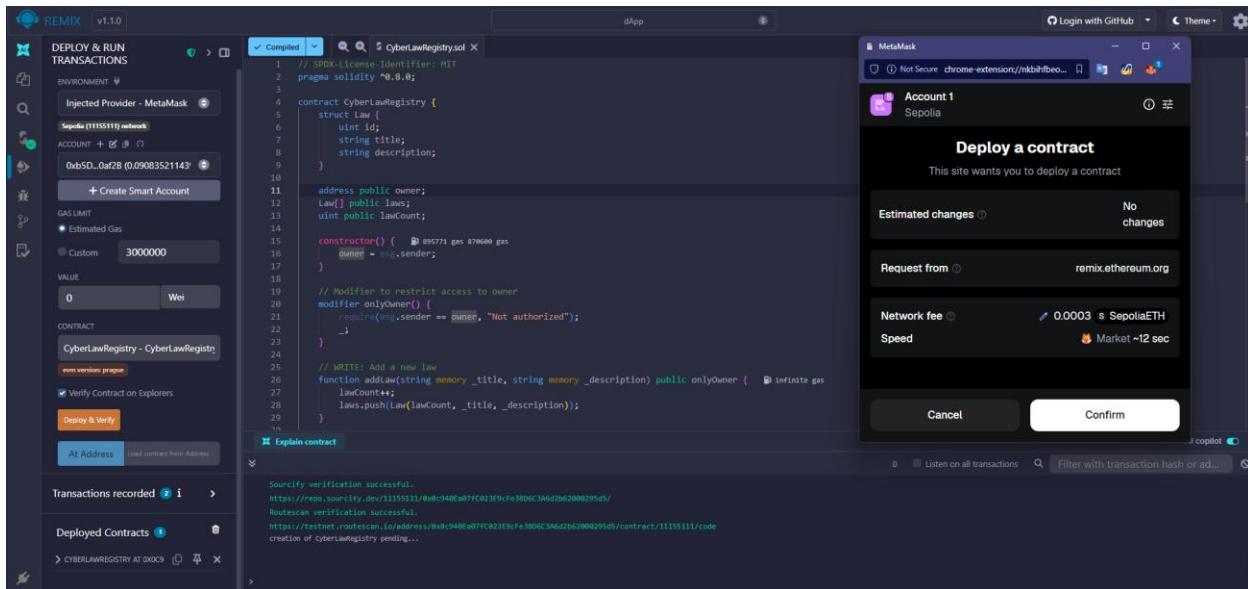


Blockchain Technology for Business

Assignment # 2

1) Deploy Solidity Smart Contract on Sepolia testnet using Remix IDE and connect with MetaMask:



Etherscan Transaction Details:

The screenshot shows the Etherscan Transaction Details page for a Sepolia Testnet transaction. The transaction hash is 0x308c9eac18488311c1961f057acc0df9ad13ecc42315282adecd2d3c7062f1cf. The transaction was successful, with 282 block confirmations at block 9543368. It was executed by the contract 0xb5D45f39...aeCc0af2B on behalf of the owner 0x0c940Ea0...2000295d5. The transaction occurred 56 mins ago (Nov-02-2025 09:02:00 AM UTC). The value sent was 0 ETH, and the transaction fee was 0.000359964001919808 ETH. The gas price was 1.500000008 Gwei (0.00000000150000008 ETH). The transaction is identified as a 'Call' action, specifically 'Add Law'. The page also includes a note that this is a Sepolia Testnet transaction only.

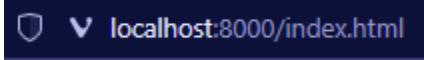
³⁰: A transaction is a cryptographically signed instruction that changes the blockchain state. Block explorers track the details of all transactions in the network. Learn more about transactions in our [Knowledge Base](#).

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2) Hosting it on Browser through cmd:

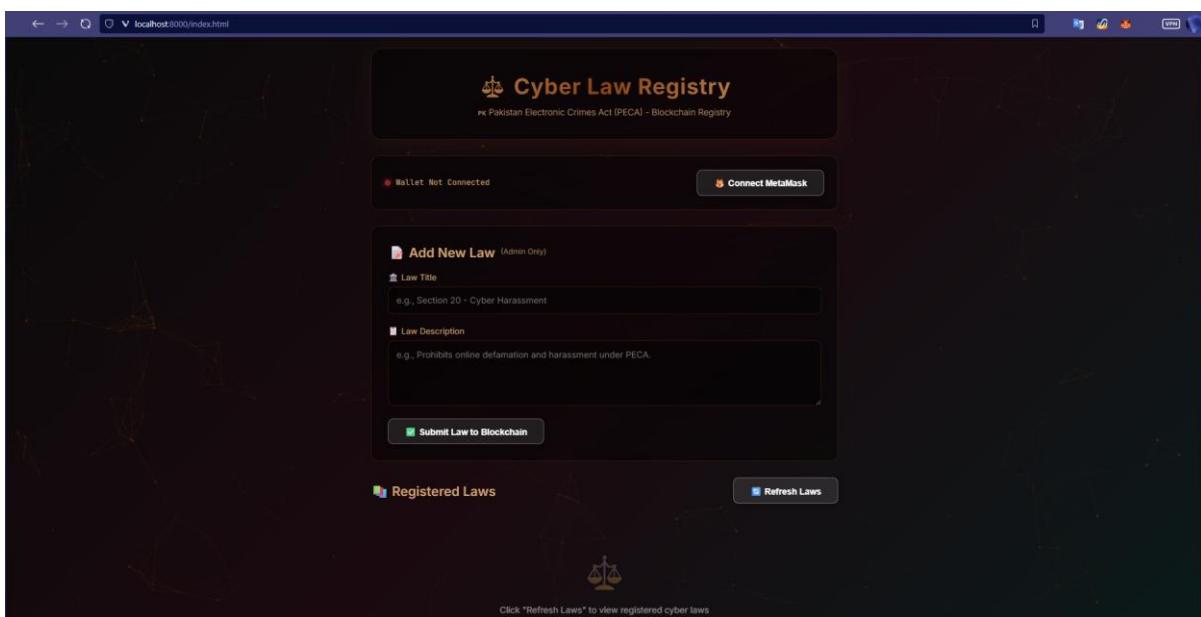
```
C:\WINDOWS\system32\cmd. + ~
Microsoft Windows [Version 10.0.26100.6899]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Muskan Ahmed>D:
D:>cd "Muskan\Fast Uni\Semester 5\Blockchain\Assignments\A2\CyberLawDApp"
D:\Muskan\Fast Uni\Semester 5\Blockchain\Assignments\A2\CyberLawDApp>python -m http.server 8000
Serving HTTP on :: port 8000 (http://[::]:8000/) ...
```

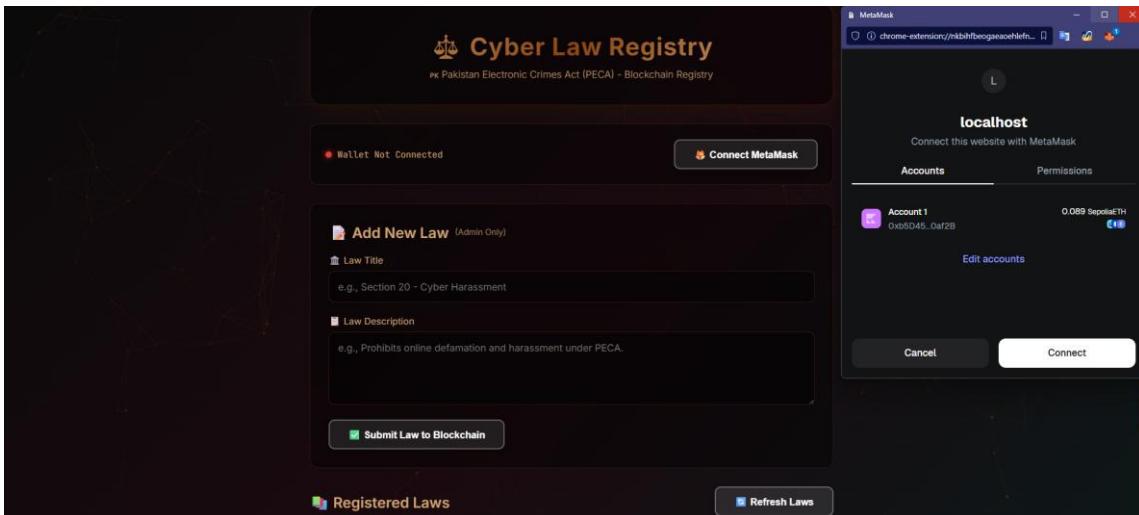


3) Interacting with Frontend:

a) Main Webpage:



b) Connecting the Wallet:



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c) After User Selects “Submit Law to Blockchain”:

The screenshot shows the Cyber Law Registry application running on a Sepolia Testnet. On the left, the main interface displays a form titled "Add New Law (Admin Only)" with fields for "Law Title" (Section 18: Electronic Forgery) and "Law Description" (A criminal offence to create, alter, or manipulate electronic records, digital signatures, or blockchain data with intent to deceive or defraud others). A "Submit Law to Blockchain" button is at the bottom. On the right, a MetaMask extension window shows a "Transaction request" with the following details:

- Request from: Sepolia
- Interacting with: Alert
- Network fee: 0.0004 \$ SepoliaETH
- Speed: Market ~12 sec

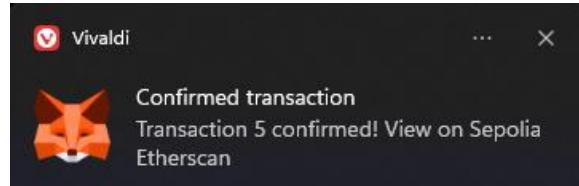
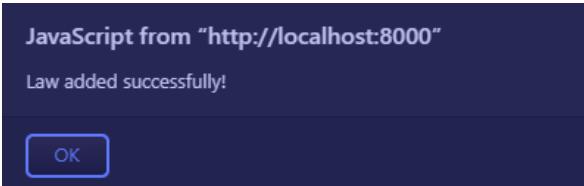
Buttons for "Cancel" and "Confirm" are present.

Etherscan Transaction Details:

The screenshot shows the Etherscan transaction details page for the submitted law. Key information includes:

- TRANSACTION ACTION: Call AddLaw Function by 0xb5D45f39...aeCc0af2B on 0x0c940Ea0...2000295d5
- Status: Success
- Block: 9543368 (2 Block Confirmations)
- Timestamp: 23 secs ago (Nov-02-2025 09:02:00 AM UTC)
- From: 0xb5D45f39ddF8130DAFbde1E1749BD49aeCc0af2B
- To: 0x0c940Ea07fc023E9cFe38D6C3A6d2b62000295d5
- Value: 0 ETH
- Transaction Fee: 0.000359964001919808 ETH
- Gas Price: 1.500000008 Gwei (0.000000001500000008 ETH)

A transaction is a cryptographically signed instruction that changes the blockchain state. Block explorers track the details of all transactions in the network. Learn more about transactions in our [Knowledge Base](#).



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d) After User Selects "Refresh Laws":

The screenshot shows the 'Registered Laws' section of the Cyber Law Registry. It displays three laws:

- Law #1**: **Section 24 - Unauthorized Access to Code**. Prohibits unauthorized access or attempts to access computer source code, passwords, or security information with criminal intent.
- Law #2**: **Section 17 - Cyber Stalking**. Prohibits using electronic means to repeatedly intimidate, threaten, or harass individuals online.
- Law #3**: **Section 16 - Malicious Code Distribution**. Makes it illegal to transmit viruses, worms, trojans, or any malicious code that damages computer systems.

A 'Refresh Laws' button is visible at the top right of the list.

e) New Law Added:

The screenshot shows a modal window titled 'Law #5' for 'Section 18: Electronic Forgery'. The text in the modal states: 'This section makes it a criminal offence to create, alter, or manipulate electronic records, digital signatures, or blockchain data with intent to deceive or defraud others.'

4) Final Result:

The screenshot shows the Cyber Law Registry interface with the new law added. At the top, there is a header for the 'Cyber Law Registry' and a sub-header 'PK Pakistan Electronic Crimes Act (PECA) - Blockchain Registry'. Below this, there are two main sections: 'Add New Law' (Admin Only) and 'Registered Laws'.

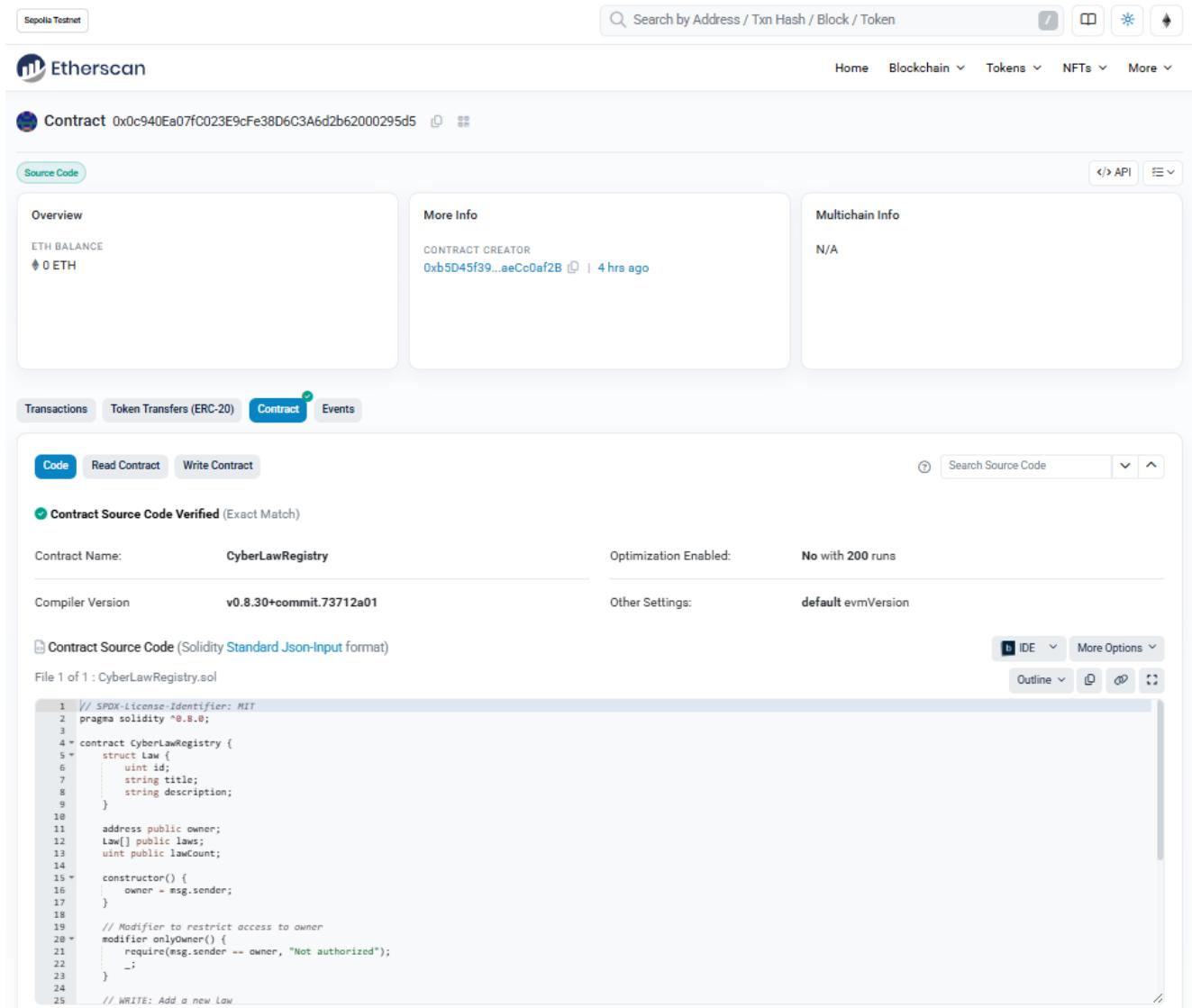
In the 'Add New Law' section, there are fields for 'Law Title' (e.g., Section 20 - Cyber Harassment) and 'Law Description' (e.g., Prohibits online defamation and harassment under PECA). A 'Submit Law to Blockchain' button is present.

In the 'Registered Laws' section, the three laws are listed again, including the newly added 'Law #5'.

5) Verify & Publish Contract Source Code

Link: <https://sepolia.etherscan.io>

Contract Address: 0x0c940Ea07fC023E9cFe38D6C3A6d2b62000295d5



The screenshot shows the Etherscan interface for a contract named 'CyberLawRegistry'. The 'Source Code' tab is selected. The contract has 0 ETH balance. The creator is 0xb5045f39...aeCc0af2B, and it was created 4 hours ago. The code is verified (Exact Match). The compiler version is v0.8.30+commit.73712a01. The code editor shows the Solidity source code:

```
// SPDX-License-Identifier: MIT
pragma solidity ^0.8.0;

contract CyberLawRegistry {
    struct Law {
        uint id;
        string title;
        string description;
    }
    address public owner;
    Law[] public laws;
    uint public lawCount;
    constructor() {
        owner = msg.sender;
    }
    modifier onlyOwner() {
        require(msg.sender == owner, "Not authorized");
        _;
    }
    // WRITE: Add a new Law
}
```

Thank you :)