Program: Web3.js and Solidity Contract Demo

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1. Introduction
The Web3.js and Solidity Contract Demo is a web application that demonstrates how to interact with a Solidity smart contract using the Web3.js library. It allows users to submit a payment and send an email using a form. The demo showcases the integration of blockchain and email functionalities.

2. System Requirements
To use the Web3.js and Solidity Contract Demo, ensure you have the following:
- A compatible web browser (Chrome, Firefox, Safari, etc.)
- An active internet connection
- A web server to serve the HTML file (e.g., Apache, Nginx) OR a local development server (e.g., Live Server extension in Visual Studio Code)

3. Installation
There is no installation required for the program itself. However, you need to have a web server running to serve the HTML file. Alternatively, you can use a local development server like the Live Server extension in Visual Studio Code.

4. Usage
To use the Web3.js and Solidity Contract Demo, follow these steps:
1. Replace the following placeholders in the HTML file with your own values:
- `< your_testnet_rpc_endpoint >`: Replace with the RPC endpoint of the Rootstock testnet you want to connect to.
- `< your_contract_address >`: Replace with the address of your deployed Solidity contract.
- `< contract_abi >`: Replace with the ABI (Application Binary Interface) of your contract.
- `< your_method_name >`: Replace with the method name in your contract that initiates the payment and email sending process.
- `< your_payment_amount_ether >`: Replace with the amount (in Ether) that needs to be paid.
- `$.post('/send_email', ...`: Replace this line with your own implementation to send the email using Python and the SMTP library.

2. Start the web server to serve the HTML file or use a local development server like the Live Server extension in Visual Studio Code.

3. Open the web application in your web browser by entering the URL of the HTML file.

4. Fill in the payment and email details in the form:
- Wallet Details: Enter the recipient's wallet address.

- Email Subject: Enter the subject of the email.
- Email Body: Enter the body/content of the email.
- Attachment: Optionally, you can upload a file attachment.

5. Click the "Submit Payment and Send Email" button to initiate the transaction and email sending process.

6. Wait for the operation to complete. If successful, you will see the message "Payment and email sent successfully!" in the "Transaction and Email Sending Result" section. If there is an error, you will see the corresponding error message.

5. Configuration
The Web3.js and Solidity Contract Demo requires configuration specific to your environment. You need to replace the placeholders in the HTML file with your own values. Please refer to section 4 - Usage for details on the specific placeholders that need to be replaced.

6. Troubleshooting
If you encounter any issues while using the Web3.js and Solidity Contract Demo, try the following troubleshooting steps:
- Ensure that you have replaced all the necessary placeholders with the correct values.
- Check your internet connection.
- Confirm that your web server is correctly serving the HTML file or that the local development server is running.
- Refer to the error message displayed in the "Transaction and Email Sending Result" section for more information about the issue.

If the issue persists, seek assistance from your system administrator or consult the documentation of the tools and libraries used (Web3.js, Solidity, etc.).

7. Conclusion
Congratulations! You have successfully installed and used the Web3.js and Solidity Contract Demo.