

Electronic Health Records Maintenance Using Blockchain - User Manual

1. Introduction

This user manual will guide you on how to use the Electronic Health Records Maintenance System to securely upload, store, and retrieve electronic health records (EHRs) using blockchain technology and IPFS for decentralized storage.

2. Getting Started

2.1 Requirements

To use the platform, ensure you have:

- A modern web browser (e.g., Chrome, Firefox).
 - The MetaMask browser extension (for Ethereum wallet management).
 - Node.js and Python installed on your machine (for local setup).
 - An internet connection.
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2.2 Setup

2.2.1 Installing MetaMask

1. Go to the [MetaMask website](#).
2. Download and install the MetaMask extension for your browser.
3. Create a new wallet or import an existing one using your seed phrase.
4. Add test tokens to your wallet (if using a test Ethereum network) to interact with the blockchain.

2.2.2 Accessing the Web App

1. Open the web app in your browser at <http://localhost:4200/>.
 2. Click "Connect Wallet" to link your MetaMask account with the web app.
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3. Using the Platform

3.1 Uploading Health Records

1. Navigate to the "Upload Health Records" section of the web app.
2. Click the "Choose File" button and select the health record file you want to upload.
3. Confirm the upload action in MetaMask to save the file on IPFS.
4. The file will be pinned to IPFS, and its details (CID) will be recorded on the blockchain.

3.2 Viewing Health Records

1. Go to the "My Health Records" section of the app.
2. You will see a list of your uploaded health records, including file names, sizes, and upload dates.
3. Click on a file name to view its details or download it from the platform.

3.3 Downloading Health Records

1. In the "My Health Records" section, select the file you wish to download.
2. Click the "Download" button next to the file name.
3. The file will be retrieved from IPFS and downloaded to your local device.

3.4 Sharing Access

1. Navigate to the "Manage Permissions" section of the app.
2. Select the health record file you want to share.
3. Enter the Ethereum wallet addresses of the users you wish to grant access to.
4. Confirm the action via MetaMask. The smart contract will update permissions on the blockchain, allowing specified users to access the file.

4. FAQ

4.1 What if I lose my MetaMask wallet?

If you lose access to your MetaMask wallet, you will lose access to your health records. Always keep your MetaMask seed phrase secure.

4.2 Can I use this system on another device?

Yes, you can access the platform from any device if you log in with the same MetaMask wallet.

4.3 Is my data secure?

Yes, your health records are encrypted and stored decentralized using IPFS. Only you and users with granted permission can access the records.

5. Troubleshooting

5.1 Unable to Connect MetaMask

- Ensure the MetaMask extension is installed and unlocked.
- Verify that you're connected to the correct Ethereum network (testnet or mainnet).
- Restart your browser or refresh the web app.

5.2 File Upload Issues

- Check that your file is within the allowed size limit.
- Ensure you have sufficient tokens in your wallet to cover the gas fees for transactions.
- Verify that your internet connection is stable during file uploads.

6. Technical Support

For further assistance or questions, please contact:

- Developer: Lahari Nadendla
- Email: ln5k8@umsystem.edu
- GitHub Repository: https://github.com/Lahari529/blockchain_project.git