Information Technologies for Industrial Engineers

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Decentralized Application (DApp)

What you need

- Alchemy API key

- Addresses
  - Account address (from MetaMask)
  - Secret contract address
  - ERC20 (token) contract address
  - ERC721 (NFT) contract address

- Token Symbol

What you need

- ABIs
    - Secret contract address
    - ERC20 (token) contract address
    - ERC721 (NFT) contract address

Setup

- `npm create vite@latest`

- …

- …

- `npm install viem wagmi`

.env

```
VITE_ALCHEMY_KEY=...
VITE_MY_ACCOUNT_ADDRESS=...
VITE_SECRET_CONTRACT_ADDRESS=...
VITE_TOKEN_CONTRACT_ADDRESS=...
VITE_TOKEN_SYMBOL=
VITE_NFT_CONTRACT_ADDRESS=...
```

`./src/env.ts`

```typescript
export const ALCHEMY_KEY = import.meta.env.VITE_ALCHEMY_KEY;
export const MY_ACCOUNT_ADDRESS = import.meta.env.VITE_MY_ACCOUNT_ADDRESS;
export const SECRET_CONTRACT_ADDRESS = import.meta.env
  .VITE_SECRET_CONTRACT_ADDRESS;
export const TOKEN_CONTRACT_ADDRESS = import.meta.env
  .VITE_TOKEN_CONTRACT_ADDRESS;
export const NFT_CONTRACT_ADDRESS = import.meta.env.VITE_NFT_CONTRACT_ADDRESS;
export const TOKEN_SYMBOL = import.meta.env.VITE_TOKEN_SYMBOL;

if (
  !ALCHEMY_KEY ||
  !MY_ACCOUNT_ADDRESS ||
  !SECRET_CONTRACT_ADDRESS ||
  !TOKEN_CONTRACT_ADDRESS ||
  !NFT_CONTRACT_ADDRESS ||
  !TOKEN_SYMBOL
) {
  throw new Error("Please set env variables correctly.");
}
```

```tsx
import React from "react";
import ReactDOM from "react-dom/client";
import App from "./App.tsx";

import { WagmiConfig, createConfig, sepolia } from "wagmi";
import { configureChains } from "wagmi";
import { alchemyProvider } from "wagmi/providers/alchemy";
import { ALCHEMY_KEY } from "./env.ts";

const { chains, publicClient } = configureChains(
  [sepolia],
  [alchemyProvider({ apiKey: ALCHEMY_KEY })]
);
import { InjectedConnector } from "wagmi/connectors/injected";

const config = createConfig({
  autoConnect: true,
  connectors: [new InjectedConnector({ chains })],
  publicClient: publicClient,
});

ReactDOM.createRoot(document.getElementById("root")!).render(
  <React.StrictMode>
    <WagmiConfig config={config}>
      <App />
    </WagmiConfig>
  </React.StrictMode>
);
```

./src/abi.ts

```ts
export const secretABI = [
  // ...
] as const;

export const tokenABI = [
  // ...
] as const;

export const NFTABI = [
  // ...
] as const;
```

`./src/App.tsx`

https://gist.github.com/nnnpooh/8e2bf02de687f3f312c8d36d0bfa5389#file-app-tsx