TBADCRYPTO

(DASHBOARD)

TEAM DETAILS:

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Team Size: 5

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Introduction

A crypto currency dashboard that displays historical price data over the past five years is

powerful tool for investors seeking a comprehensive understanding of market dynamics.

This feature-rich interface offers users a detailed historical perspective on the performance

of various crypto currencies, enabling insightful analysis and informed decision-making.

Through visually intuitive charts and graphs, the dashboard allows for effective

comparisons of multiple crypto currencies, aiding in the identification of top performers a

overall market trends.

Description:

TBADCrypto is a sophisticated cryptocurrency dashboard designed to provide investors with

comprehensive insights into market dynamics through detailed historical price data analysis

spanning five years. Featuring visually intuitive charts, interactive tools, and seamle

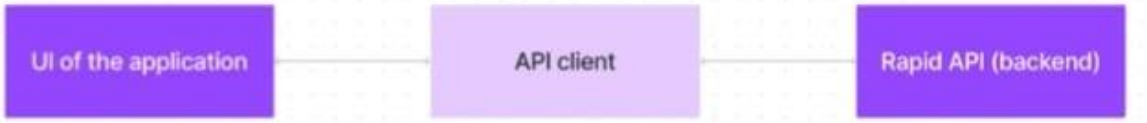
Scenario based introduction:

Imagine waking up in a world where traditional banks no longer exist. Instead of relying on middlemen, people transact directly with one another using a digital currency that isn't controlled by any government or institution. You walk into a store, scan a QR code, and instantly send payment from your digital wallet—no waiting, no fees, and no need for a bank. navigation, the platform empowers users to identify top-performing assets and make informed investment decisions.

Technical architecture:

The TBADCrypto is built on a decentralized architecture powered by blockchain technology and a combination of

distributed computing, cryptographic security, and consensus mechanisms.



Project goals and objectives:

Project Goals Decentralization & Trustless Economy

Build a permissionless system where users can transact and interact without intermediaries.

Implement DAO (Decentralized Autonomous Organization) governance to ensure community-driven decisions

Scalability & High-Performance Infrastructure

Utilize Layer 2 solutions (Rollups, State Channels) and sharding for high-speed transactions.

Ensure low transaction fees and fast settlement times for mass adoption

Interoperability & Cross-Chain Integration

Enable seamless asset transfers across different blockchain networks.

Develop bridges and compatibility with major ecosystems like Ethereum, Solana, and Polkadot.

Key features:

Decentralization & Trustless Transactions

No central authority; transactions are verified by blockchain consensus.

Users have full control over their assets without intermediaries.

Blockchain Infrastructure

Built on a scalable, high-performance blockchain (Layer 1 or Layer 2).

Supports smart contracts for automation and transparency.

Smart Contracts & Automation

Self-executing contracts with predefined rules (e.g., Ethereum's Solidity).

Enables decentralized finance (DeFi), NFTs, and governance.

Interoperability & Cross-Chain Integration

Compatible with multiple blockchains (Ethereum, Binance Smart Chain, Solana, Polkadot). Bridges and wrapped tokens for seamless asset transfers.

Pre-Requisites

To develop InsightStream, the following tools and **technologies are required:**

Node.js & npm: Install and configure for JavaScript execution.

Download: https://nodejs.org/en/download/

Installationinstructions:
https://nodejs.org/en/download/package-manager/

React.js: Create a dynamic user interface.

HTML, CSS, & JavaScript: Basic web development knowledge is essential.

Git Version Control: Use platforms like GitHub for collaboration.

Git: Download and installation instructions can be found at:

https://git-scm.com/downloads/

Development Environment: Recommended editors include Visual Studio Code, Sublime Text, or WebStorm.

Visual Studio Code: Download from
https://code.visualstudio.com/download

Sublime Text: Download from
https://www.sublimetext.com/download

WebStorm: Download from https://www.jetbrains.com/webstorm/download

Navigate to the project directory and install dependencies:

cd news-app-react

npm install

Start the development server:

npm start

Open a browser and visit **http://localhost:3000** to access the application.

Project Structure

The project is organized into four primary folders:

Components: Houses reusable UI elements.

Context: Contains the Context API for global state management.

Pages: Stores page-specific components that map to different URLs.

Styles: Includes all CSS files for styling.

Project Milestones

Milestone 1: Project Setup & Configuration

Install necessary tools including React.js, React Router DOM, Axios, and Tailwind CSS.

Set up the basic project structure.

Open the project folder to install necessary tools. In this project, we use:

- React.js
- React Router Dom
- React Icons
- Bootstrap/Tailwind CSS
- Axios

For further reference, use the following resources

https://react.dev/learn/installation

https://react-bootstrap-v4.netlify.app/getting-started/introduction/

https://axios-http.com/docs/intro

https://reactrouter.com/en/main/start/tutorial

Milestone 2: Development Phase

- **Conceptualization & Planning**

Define the vision: What will the TBADCrypto offer (gaming, social, commerce, etc.)?

Select the blockchain: Ethereum, Solana, or a custom chain?

Identify token utility: Governance, transactions, staking, etc.

Research market trends and competitors.

- **Blockchain & Smart Contract Development**

Develop smart contracts for tokens, NFTs, and in-game assets.

Build a native token and set up liquidity pools

Fetching crypto currency via api:

Create a redux store: have a fully functional Redux store with a counter slice, and you can integrate it into your React app

```
import { configureStore } from "@reduxjs/toolkit";
import { cryptoApi } from "../services/cryptoApi";

export default configureStore({
  reducer: {
    [cryptoApi.reducerPath]: cryptoApi.reducer,
  },
  middleware: (getDefaultMiddleware) =>
    getDefaultMiddleware().concat(cryptoApi.middleware),
});

```

Create a component to show the details of cryptocurrency:

This code defines a React functional component called CryptoDetails responsible displaying detailed information

about a specific cryptocurrency.

```jsx
import React from "react";
import millify from "millify";
import { Typography, Row, Col, Statistic } from "antd";
import { Link } from "react-router-dom";
const { Title } = Typography;
import { useGetCryptosQuery } from "../services/cryptoApi";
import Cryptocurrencies from "./Cryptocurrencies";
import Loader from "./Loader";

const Home = () => {
  const { data, isFetching } = useGetCryptosQuery(10);
  if (isFetching) return <Loader />;
  const globalStats = data?.data?.stats;

  return (
    <>
      <Title level={2} className="heading">
        Global Crypto Stats
      </Title>
      <Row>
        <Col span={12}>
          <Statistic title="Total Cryptocurrencies" value={globalStats.total} />
        </Col>
        <Col span={12}>
          <Statistic
            title="Total Exchanges"
            value={millify(globalStats.totalExchanges)}
          />
        </Col>
        <Col span={12}>
          <Statistic
            title="Total Market Cap"
            value={millify(globalStats.totalMarketCap)}
          />
        </Col>
        <Col span={12}>
          <Statistic
            title="Total 24h Volume"
            value={millify(globalStats.total24hVolume)}
          />
        </Col>
        <Col span={12}>
          <Statistic
            title="Total Markets"
            value={millify(globalStats.totalMarkets)}
          />
        </Col>
      </Row>
      <div className="home-heading-container">
        <Title level={2} className="home-title">
          Top 10 Cryptocurrencies in the world
        </Title>
        <Title level={3} className="show-more">
          <Link to="/cryptocurrencies">Show More</Link>
        </Title>
      </div>
      <Cryptocurrencies simplified />
    </>
  );
};

export default Home;
```

Create a Homepage:

This component, named Home, is a React functional component responsible for rendering the home page of the cryptocurrency dashboard.

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export default Home;
```

Project Execution

Once the development is complete, start the application using:

npm start

This will launch the app at **http://localhost:3000**, displaying key components:

USER SNIPPETS:

Home page : This pages consists of stats of global crypto like total cryptocurrencies total exchanges, market cap etc. Also consist of top 10 cryptocurrencies in the world.

Crypto currencies page : This pages contains all cryptocurrencies which ar currently in flow in the world. There is also a search feature where users can search and find out about their desired cryptocurrency

Crypto currency details page : This page contains the line chart with dat representation of price of cryptocurrencies. Also contains statistics and website links of cryptocurrencies