# **CRYPTOVERSE**

# (CryptocurrencyDashboard)

# > TeamDetails:

TEAMLEADER	EMAILID
VENKATESAN B	venkatesanbabu2005@gmail.com

TEAMMEMBERS	EMAILID
PANNEERSELVAM T	panneerselvam2708@gmail.com
DHARMA B	beastdharma475@gmail.com
SUDEEP S	vbsudeep1@gmail.com

# **CRYPTOVERSE:**

# **Introduction:**

The cryptoverse refers to the expansive digital ecosystem surrounding cryptocurrencies and blockchaintechnology. It encompasses a various applications, including decentralized finance, virtual worlds, and digital assets, enabling users to engage in innovative financial and creative activities.

Cryptocurrency is a type of digital or virtual currency that uses cryptography for security. It operates on decentralized networks based on blockchain technology, whichis adistributedledgerenforcedbyanetworkofcomputers (oftenreferredto as nodes).

# **CurrentTrendsinthe Cryptoverse:**

**Mass Adoption:** Cryptocurrencies are moving beyond rich markets, attracting interest from a broader audience, including everyday consumers and institutional investors.

**Environmental Concerns:** The energy consumption associated with mining cryptocurrencies has raised concerns, prompting a shift towards more sustainable practices like Proof of Stake.

**Educational Initiatives:** There is a growing need for educational resources tohelpthegeneral public understand the complexities of cryptocurrency.

## **Pre-requisites:**

#### Node.jsandnpm:

Node.jsisapowerfulJavaScriptruntimeenvironmentthat allowsyou to run JavaScript code on the local environment. It providesa scalableand efficient platform for building network application.

Download: <a href="https://nodejs.org/en/download/">https://nodejs.org/en/download/</a>

**React.js**:It's is a popular JavaScript library for building user interfaces. It enables developers to create interactive and reusable UI components, making it easier to build dynamic and responsive web applications.

• Startthedevelopmentserver:

npm start

Thiscommand launches the developmentserver, and access our React app at <a href="http://localhost:3000">http://localhost:3000</a> in our web browser.

- ✓ HTML, CSS, and JavaScript: Basic knowledge of HTML for creating the structureofyourapp, CSS for styling, and JavaScript for client-side interactivity is essential.
- ✓ <u>Version Control</u>: Use GIT for version control, that enabling collaboration and tracking changes throughout the development process. We use the Platform GitHub an host your repository.

<u>GIT:</u> Download and installation instructions can be found at: <a href="https://git-scm.com/downloads">https://git-scm.com/downloads</a>

✓ <u>Development Environment</u>: Choose a code editor or Integrated Development Environment (IDE) that suits for our preferences, we use Visual Studio Code.

Visualstudiocode: https://code.visualstudio.com/download.

#### **InstallDependencies**:

 Navigateintotheclonedrepositoryandinstalllibraries: cd crypto npminstall

#### ✓ StarttheDevelopmentServer:

Tostartthedevelopmentserver, execute the following command: npm run dev (vite) or npm start.

#### **OURGITHUBREPOSITORYLINK:**

https://github.com/venkatesan-2808/cryptocurrency1

## **AccesstheApp:**

- Openyourwebbrowserandnavigateto <a href="http://localhost:5173/">http://localhost:5173/</a>
- YoushouldseetheourCryptoverseapp'shomepage, indicating that the installation and setupwere successful.

Nowwehavesuccessfullyinstalledandsetuptheapplicationonour local machine. We can now proceed with further customization, development, and testing as needed.

# **ProjectStructure:**



## **ProjectFlow:**

• Projectsetupandconfiguration:

### 1. SetupReactApplication:

- CreateaReactappintheclientfolder.
- Installrequiredibraries
- Createrequired pages and components and addroutes.

#### 2. DesignUI components:

- CreateComponents.
- Implementlayout andstyling.
- Addnavigation.

## 3. Implement frontendlogic:

- Integration with API endpoints.
- Implement databinding.

#### Reference Video Link:

https://drive.google.com/file/d/1EokogagcLMUGiIluwHGYQo65x8GRpDcP/view?usp=sharing

## ReferenceImage:

```
O shopEZ
刘 File Edit Selection View Go Run Terminal Help
                                                        JS index.is M
        EXPLORER
ф
                                        client > src > JS App.js > 🛱 App
      ∨ SHOPEZ
                                               import logo from "./logo.svg";
                                               import "./App.css";
         > public
                                               function App() {
         # App.css
                                                   <div className="App">
                                                     <header className="App-header">
                                                       <img src={logo} className="App-logo" alt="logo" />
         JS App.test.js
品
          # index.css
                                                        Edit <code>src/App.js</code> and save to reload.
         JS index.is
G
         logo.svg
         JS reportWebVitals.js
                                                         className="App-link"
Ø
         JS setupTests.js
                                                         href="https://reactjs.org"
                                                         target="_blank"
        gitignore
                                                          rel="noopener noreferrer"
        {} package-lock.json
        {} package.json
                                                         Learn React
        ① README.md
                                                        </a>
        > server
                                                      </header>
                                                   </div>
                                                                           TERMINAL
                                        Compiled successfully!
                                        You can now view client in the browser.
                                        Compiled successfully!
                                        You can now view client in the browser.
                                                            http://localhost:3000
                                          On Your Network: http://192.168.29.151:3000
(Q)
                                        Note that the development build is not optimized.
      OUTLINE
                                        To create a production build, use npm run build.
      > TIMELINE
        NPM SCRIPTS
                                        webpack compiled successfully
```

## **ProjectDevelopment:**

#### • Createareduxstore:

- 1. import{configureStore}from"@reduxjs/toolkit";`:Thislineimportsthe
  `configureStore`functionfromRedux Toolkit.ReduxToolkitis apackage that
  provides utilities to simplify Redux development, making it easier to write
  Redux logic with lessboilerplatecode.
- 2. `import{cryptoApi}from"../services/cryptoApi"; `:Thislineimportsthe `cryptoApi ` object from the `cryptoApi.js ` file located in the `../services ` directory.

- 3. 'exportdefaultconfigureStore({...}); `:ThislineexportstheRedux store configuration created by the `configureStore' function as the default export of this module.
- 4. `reducer:{[cryptoApi.reducerPath]:cryptoApi.reducer}`:Thispart of the configuration specifies the rootreducer for the Redux store. In this case, it sets the
- `cryptoApi.reducer`asthereducerforthesliceofstatemanagedby the `cryptoApi` API slice. The `cryptoApi.reducerPath` likely refers to the slice'suniqueidentifier, which is used internally by Redux Toolkit.
- 5. `middleware: (getDefaultMiddleware) => getDefaultMiddleware().concat(cryptoApi.middleware), `: This part of the configuration specifies middleware for the Redux store. Middleware intercepts actions before they reach the reducers and can be used for variouspurposes, such as logging, asynchronous actions, or handling API requests. Here, it uses the
- `getDefaultMiddleware` function provided by Redux Toolkit to get the default middlewarestackandappendsthe`cryptoApi.middleware`. Thismiddlewarelikely handles asynchronous API requests and dispatches corresponding actions based on the API response.

this configuration sets up a Redux store with a specific reducer and middlewareprovided by the `cryptoApi` object, which presumablymanagesstaterelated to cryptocurrency data fetched from an external API. This setup allows you to manage and interact with this data using Redux within your React application.

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

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

10 });
```

,andqueryfunctionsrequiredformakingrequeststothecryptocurrency API.

# CreateaAPIsliceusingReduxtoolkit's:

#### 1. ImportStatements:

- -`import { createApi, fetchBaseQuery } from
- "@reduxjs/toolkit/query/react"; `: Thislineimports the necessary functions from Redux Toolkit's query-related module.
- `createApi` is used to create an API slice, while `fetchBaseQuery` is a utility function provided by Redux Toolkit for making network requests using `fetch`.

## 2. <u>HeaderandBaseURLConfiguration:</u>

- `constcryptoApiHeaders={...}`:Thisobjectcontainsheadersrequired for making requests to the cryptocurrency API. The values for `X- RapidAPI-Key"` and
- `"X-RapidAPI-Host"`areretrievedfromenvironmentvariablesusing `import.meta.env`.
- -`constbaseUrl=<u>https://coinranking1.p.rapidapi.com</u>`:Thisvariable holds the base URL for the cryptocurrency API, which is also retrieved from environment variables.

#### 3. RequestCreationFunction:

`constcreateRequest=(url)=>({url,headers:cryptoApiHeaders});`:This function.

`createRequest` takes a URL and returns an object with the URL and headers required for making a request. It utilizes `cryptoApiHeaders` to include necessary headers intherequest.

#### 4. CreateAPISlice:

- `exportconstcryptoApi=createApi({...})`:Thispartusesthe
  `createApi` function to create an API slice named `cryptoApi`. It takes
  an object with several properties:
- `reducerPath`: Specifies the pathunder which the slice's reducer will be mounted in the Redux store.
- `baseQuery`:ConfiguresthebasequeryfunctionusedbytheAPI slice. In this case, it uses `fetchBaseQuery` with the base URL specified.
- `endpoints`:DefinestheAPIendpointsavailableintheslice.It'san object with keys corresponding to endpoint names and values being endpoint definitions.

## 5. APIEndpoints:

- `getCryptos`, `getCryptoDetails`, `getCryptoHistory`: These areendpoints defined using the `builder.query` method. Each endpoint is configured with a `query` function that returns the request configuration object created by `createRequest`.

## 6. ExportingHooks:

- `exportconst{...}`:Thislineexportshooksgeneratedbythe `createApi`function,allowingcomponentstoeasilyfetchdatafromthe API slice. Each hook corresponds to an endpoint defined in the `endpoints`object.

Overall, this code sets up an API slice named `cryptoApi` using Redux Toolkit's query functionality. It defines endpoints for fetching cryptocurrencies, cryptocurrency details, and cryptocurrency history.

```
App.jsx
               Loader.jsx
                               JS cryptoApi.js •
                                                                       Hart.jsx
code > src > services > JS cryptoApi.js > ...
       import { createApi, fetchBaseQuery } from "@reduxjs/toolkit/query/react";
  2
      const cryptoApiHeaders = {
  3
         "X-RapidAPI-Key": 'd9ccbe2e00mshe785fadd99ee82cp143ca5jsn2b972854cbd8',
  4
  5
         "X-RapidAPI-Host": 'coinranking1.p.rapidapi.com',
  6
  7
  8
      const baseUrl = 'https://coinranking1.p.rapidapi.com';
 10
      const createRequest = (url) => ({ url, headers: cryptoApiHeaders });
 11
       export const cryptoApi = createApi({
 12
 13
         reducerPath: "cryptoApi",
         baseQuery: fetchBaseQuery({ baseUrl }),
 14
         endpoints: (builder) => ({
 15
           getCryptos: builder.query({
 16
            query: (count) => createRequest(`/coins?limit=${count}`),
 17
 18
          }),
 19
           getCryptoDetails: builder.query({
 20
            query: (coinId) => createRequest(\(^/\coin/\${\coinId}\^\),
 21
 22
          }),
 23
           getCryptoHistory: builder.query({
             query: ({ coinId, timePeriod }) =>
 24
              createRequest(`coin/${coinId}/history?timePeriod=${timePeriod}`),
 25
 26
          }),
 27
         }),
 28
       });
 29
 30
       export const {
 31
         useGetCryptosQuery,
 32
         useGetCryptoDetailsQuery,
 33
         useGetCryptoHistoryQuery,
 34
        = cryptoApi;
```

## • AddingProvidersinthemainfunction:

#### ReactRouterwithBrowserRouter:

- `<BrowserRouter> `:Thiscomponentisprovidedby `react-routerdom ` and enables client-side routing using the HTML5 history API. It wraps the application, allowing it to use routing features.

#### ReduxProvider:

\_

- ` < Providerstore = { store } > `: This component is provided by ` react-redux ` and is used to provide the Redux store to the entire application. It wraps the application, allowing all components to access the Redux store.

Overall, thiscodeinitializestheReactapplicationbyrenderingtheroot component (`<App />`) into the DOM, while also providing routing capabilities through

`BrowserRouter`andstatemanagementwithReduxthrough`Provider`. Additionally, it ensures stricter development mode checks with `<React.StrictMode>'.

```
import React from "react";
   import ReactDOM from "react-dom/client";
 3 import App from "./App.jsx";
 4 import "./index.css";
 5 import { BrowserRouter } from "react-router-dom";
 6 import { Provider } from "react-redux";
 7 import store from "./app/store.js";
 9 ReactDOM.createRoot(document.getElementById(
   "root")).render(
10 <React.StrictMode>
     <BrowserRouter>
       <Provider store={store}>
          <App />
       </Provider>
      </BrowserRouter>
    </React.StrictMode>
```

# • CreatingaLinechartcomponent:

ThiscodedefinesaReactcomponentcalled`LineChart`whichrendersa line chart usingthe`react-chartjs-2` library.

## 1. Imports:

importReactfrom"react":Importsthe`React` module.

import{Line}from"react-chartjs-2";`:Importsthe`Line`component from the`react-chartjs-2` library, which is used to render line charts.

import{Col,Row,Typography}from"antd"; `:Importsspecific components from the Ant Design library, including `Col`, `Row`, and `Typography.const{Title}=Typography; `:Destructuresthe`Title` component from the `Typography` module.

#### 2. ComponentDefinition:

constLineChart=({coinHistory,currentPrice,coinName})=>{...}`: Defines afunctional component called `LineChart`. It takes three props: `coinHistory`,currentPrice`, and `coinName`.

#### 3. DataPreparation:

- Insidethecomponent, itloopsthrough the `coinHistory` datatoextract `coinPrice` and `coinTimestamp` arrays. These arrays will be used as data points for the line chart.

#### 4. ChartData:

`constdata={...}`:Definesthedataobjectforthelinechart.It includes labels (timestamps) and datasets (coin prices).

#### 5. Rendering:

- Insidethereturnstatement, itrenders the chartheader, including the coin name, price change, and current price.
  - `Row`and`Col`fromAntDesignareusedtostructurethelayout.
- The `Line` componentrenders the actual line chartusing the data object defined earlier.

#### 6. Export:

- `exportdefaultLineChart;`:Exportsthe`LineChart`componentas the default export.

Overall, this component receives historical data (`coin History`), current price (`current Price'), and the name of the cryptocurrency (`coin Name') as props, and renders a line chart displaying the historical price data. It also includes additional information such as the price change and current price displayed above the chart.

```
import React from "react";
import { Line } from "react-chartjs-2";
import { Col, Row, Typography } from "antd";
const { Title } = Typography;
 const coinPrice = [];
 const coinTimestamp = [];
 for (let i = 0; i < coinHistory?.data?.history?.length; i += 1) {</pre>
   coinPrice.push(coinHistory?.data?.history[i].price);
   coinTimestamp.push(
       coinHistory?.data?.history[i].timestamp * 1000
   labels: coinTimestamp,
   datasets: [
       label: "Price In USD",
       data: coinPrice,
       backgroundColor: "#0071bd",
       borderColor: "#0071bd",
       <Title level={2} className="chart-title">
         {coinName} Price Chart
      <Title level={5} className="price-change">
         Change: {coinHistory?.data?.change}%
       <Title level={5} className="current-price">
          Current {coinName} Price: $ {currentPrice}
     </Row>
     <Line className="chart" data={data} />
export default LineChart;
```

# • <u>Creatingcryptocurrenciescomponent:</u>

#### 1. ComponentDefinition:

`constCryptocurrencies=({simplified})=>{...}`:Definesafunctional component named `Cryptocurrencies`. It accepts a prop named `simplified`,whichdetermineswhethertodisplayasimplifiedversion of the list.

#### 2. Initialization:

'constrount=simplified?10:100:Initializes the count variable based on the value of the 'simplified' prop. If 'simplified' is true, 'count' is set to 10; otherwise, it's set to 100.

#### 3. FetchingCryptocurrencyData:

`const{data:cryptosList,isFetching}=useGetCryptosQuery(count);`: Uses the

`useGetCryptosQuery` hook provided by the `cryptoApi' service tofetch cryptocurrency data. It retrieves the list of cryptocurrencies (`cryptosList`) and a boolean flag (`isFetching`) indicating whether the data is being fetched.

## 4. FilteringCryptocurrencyData:

- The `useEffect` hookisusedto filter theoryptocurrency databasedon the `searchTerm` state variable. It updates the `cryptos` state with filtereddatawhenever `cryptosList` or `searchTerm` changes.

## 5. RenderingLoader:

- `if(isFetching) return <Loader />; `: Ifdatais still being fetched (`isFetching` is true), it returns a `Loader` component to indicate that the data is loading.

#### 6. RenderingSearchInput:

- `!simplified&&(...)`:If`simplified`isfalse,itrendersasearchinput fieldallowinguserstosearchforspecificcryptocurrenciesbyname.

#### 7. RenderingCryptocurrency Cards:

- The `Row` and `Col` components from Ant Designare used to create a grid layout for displaying cryptocurrency cards.
- For each cryptocurrency in the `cryptos` array, it renders a `Card` component containing details such as name, price, market cap, and daily change. Each card is wrapped in a `Link` component, allowing users to navigate to the details page of a specific cryptocurrency.

#### 8. ReturnStatement:

- `return(...)`:ReturnsJSXrepresentingthecomponent'sstructureand content.

Overall, this component fetches cryptocurrency data, filters it based on a searchterm, andrenders the data in a visually appealingformat withcard-based UI. It also provides a search functionality for users to find specific cryptocurrencies.

```
import millify from "millify";
import { Link } from "react-router-dom";
import { Card, Row, Col, Input } from "antd";
import { useGetCryptosQuery } from "../services/cryptoApi";
 const count = simplified ? 10 : 100;
  const [cryptos, setcryptos] = useState([]);
   const filteredData = cryptosList?.data?.coins.filter((item) =>
    setcryptos(filteredData);
  }, [cryptosList, searchTerm]);
  if (isFetching) return <Loader />;
      {!simplified && (
        <div className="search-crypto">
            placeholder="Search Cryptocurrency"
             onChange={(e) => setsearchTerm(e.target.value)}
      <Row gutter={[32, 32]} className="crypto-card-container">
        {cryptos?.map((currency) => {
              xs = {24}
               sm = \{12\}
              lg={6}
className="crypto-card"
               key={currency.uuid}
              <Link key={currency.uuid} to={`/crypto/${currency.uuid}`}>
                <Card
                     <img className="crypto-image" src={currency.iconUrl} />
                   title={`${currency.rank}. ${currency.name}`}
                  Price: {millify(currency.price)}
                   Market Cap: {millify(currency.marketCap)}
                   Daily Change: {millify(currency.change)}
                </Card>
      </Row>
export default Cryptocurrencies;
```

## Createacomponenttoshowthedetailsofcryptocurrency:

ThiscodedefinesaReactfunctionalcomponentcalled`CryptoDetails' responsible fordisplaying detailed information about a specific cryptocurrency. Let's break down the code:

#### 1. Component Definition:

constCryptoDetails=()=>{...}`:Definesafunctionalcomponentnamed CryptoDetails`. It doesn't accept any props directly but utilizes React Router'suseParams`hooktogetthe`coinId`parameterfromtheURL.

#### 2. StateInitialization:

- Initializesstatevariables`timePeriod`and`coinHistory`.
`timePeriod`represents the selected timeperiod for displaying cryptocurrencyhistory,and`coinHistory`storeshistoricaldataofthe selected cryptocurrency.

## 3. Fetching Data:

Utilizes`useGetCryptoDetailsQuery'and'usGetCryptoHistoryQuery' hooks provided bythe `cryptoApi` service to fetchdetails and historicaldataofthe cryptocurrencyspecifiedby`coinId`.Ituses `coinId` obtainedfrom` useParams` to fetch data for the specific cryptocurrency.

## 4. SettingCoinHistory:

Utilizes `useEffect` hook to update the `coinHistory` state when coinHistoryData` changes. This ensures that the component re-renders with updated historical data.

## 5. RenderingLoader:

- Displaysaloadingindicator(`<Loader/>`)whiledataisbeingfetched (`isFetching` is true).

#### 6. TimePeriodSelection:

Renders a `Select` component allowing users to choose the time periodfor displayinghistorical data. It triggers the `setTimePeriod` function when the selection changes.

#### 7. RenderingLineChart:

- Utilizesthe`LineChart`componenttodisplaythehistoricalprice trend ofthecryptocurrencyovertheselectedtimeperiod.

#### 8. Rendering Statistics:

Displaysvarious statistics related to the cryptocurrency, such as price, rank, volume, market cap, etc. These statistics are displayed in two sections: `stats` and `generic Stats`.

#### 9. Rendering Description and Links:

- Parsesanddisplaysthedescriptionofthecryptocurrencyusing `HTMLReactParser`.
- Renderslinksrelatedtothecryptocurrency, such as official websites, social media, etc.

#### 10. ReturnStatement:

- Returns JSX representing the structure and content of the component.

Overall, this component fetches and displays detailed informationabout a specific cryptocurrency, including historical price data, key statistics, description, and related links.

# • Createa Homepage:

This component, named `Home`, is a React functional componentresponsible for rendering the home page of the cryptocurrency dashboard. Let's break down the code:

#### 1. Component Definition:

```
`constHome=()=>{...}`:Definesafunctionalcomponentnamed`
`Home`.
```

## 2. DataFetching:

- Uses the `useGetCryptosQuery` hook provided by the `cryptoApi` service to fetch data for the top 10 cryptocurrencies. It retrieves data and a boolean flag indicatingwhetherdataisbeingfetched.

## 3. Rendering Loader:

- Displaysaloadingindicator(`<Loader/>`)whiledataisbeingfetched (`isFetching` is true).

## 4. GlobalCrypto Stats:

Renders statistics about the global cryptocurrency market, including total cryptocurrencies, total exchanges, total market cap, total 24-hour volume, and total markets. These statistics are displayedusingthe `Statistic` componentfromAntDesign.

#### 5. Top10Cryptocurrencies:

- Rendersasectiondisplayingthetop10cryptocurrenciesintheworld.
- Utilizes the `Cryptocurrencies` component with the `simplified` prop settotrueto display a simplified version of the list.
- Providesalinktoviewmorecryptocurrenciesusingthe`Link` component from React Router.

#### 6. ReturnStatement:

• ReturnsJSXrepresentingthestructureandcontentofthecomponent.

Overall, this component fetches and displays global cryptocurrency statistics and the top 10 cryptocurrencies on the homepage of the dashboard. It provides links for users to navigate to the full list of cryptocurrencies.

```
1 import React from "react";
    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";
10 const Home = () => {
11   const { data, isFetching } = useGetCryptosQuery(10);
      if (isFetching) return <Loader />;
      const globalStats = data?.data?.stats;
          <Title level={2} className="heading">
             Global Crypto Stats
            <Col span={12}>
              <Statistic title="Total Cryptocurrencies" value={globalStats.total} />
             <Col span={12}>
                  title="Total Exchanges"
                  value={milify(globalStats.totalExchanges)}
             <Col span={12}>
               <Statistic
                  value={milify(globalStats.totalMarketCap)}
                  value={milify(globalStats.total24hVolume)}
             <Col span={12}>
                  value={milify(globalStats.totalMarkets)}
           </Row>
           <div className="home-heading-container">
  <Title level={2} className="home-title">
               Top 10 Cryptocurrencies in the world
             <Title level={3} className="show-more">
              <Link to="/cryptocurrencies">Show More</Link>
           <Cryptocurrencies simplified />
62 export default Home;
```

. .

# **ProjectExecution:**

## Hereisthevideolinkofreactapplicationexecution:

https://drive.google.com/file/d/1hbDljCv0R a lLrRCh-8yMea-WCvKP1e/view?usp=sharing

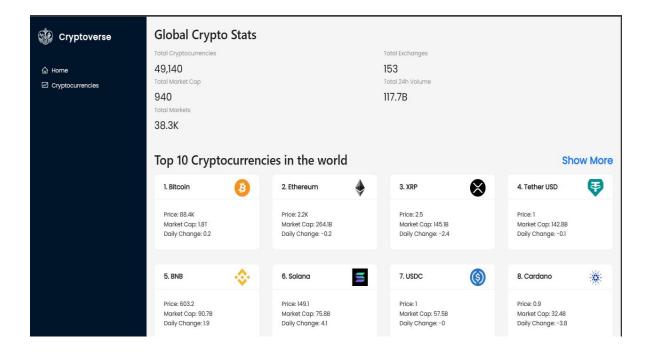
## **Projectdemo:**

Demo link:

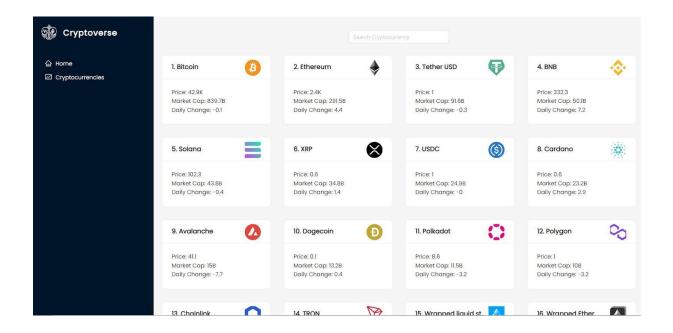
https://drive.google.com/file/d/1FheBywfSJu2XgUM1p13K4G7uo7RU5wE1/view?usp=sharing

## **UserInterfacesnips:**

Homepage: Thispagesconsists of stats of global cryptolike 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 are currently inflow in the world. There is also a search feature where users can searchand findout about their desired cryptocurrency.



This page contains the line chart with data representation of price of cryptocurrencies. Also contains statistics and websitelinks of cryptocurrencies.

