

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



**CMR COLLEGE OF ENGINEERING AND
TECHNOLOGY**

(An Autonomous Institution, Approved by AICTE, NAAC 'A+')

Kandlakoya, Medchal Road, Hyderabad-501401

A Project report on



Crypto Tracker

A Dissertation submitted in partial fulfillment of the academic requirements for the award of the degree.

Bachelor of Technology
In
Computer Science and Engineering

Submitted by

E.SIDHARTHA (20H51A05C0)

G.MURALIDHAR (20H51A05C5)

P.SHREYANSH (20H51A05D2)

Under the esteemed guidance of

Dr.S.KIRUBAKARAN

ASSOCIATE PROFESSOR

Department of Computer Science and Engineering

CMR College of Engineering & Technology

(An Autonomous Institution, Approved by AICTE, Affiliated to JNTUH, NAAC 'A+')

Kandlakoya, Hyderabad 501401

2020-2024

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

KANDLAKOYA, MEDCHAL ROAD, HYDERABAD – 501401

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



CERTIFICATE

This is to certify that the Project report on “CRYPTO TRACKER” being submitted by E.SIDHARTHA(20H51A05C0), G.MURALIDHAR (20H51A05C5), P.SHREYANSH (20H51A05D2) in partial fulfillment for the award of **Bachelor of Technology in Computer Science and Engineering** record of Bonafide work carried out his/her under my guidance and supervision.

The results embodied in this project report have not been submitted any other University or Institute for the award of any Degree.

Dr. S. Kirubakaran

Associate Professor

Dept of CSE

Dr.S.Siva Skandha

Associate Professor&HOD

Dept of CSE

Acknowledgement

With great pleasure We want to take this opportunity to express my heartfelt gratitude to all the people who helped in making this project work a grand success.

We are grateful to Dr.S.Kirubakaran, Associate professor , Dept of Computer Science and Engineering for his valuable technical suggestions and guidance during the execution of this project work.

We would like to thank **Dr. S.Siva Skandha**, Head of the Department of Computer Science and Engineering, CMR College of Engineering and Technology, who is the major driving forces to complete my project work successfully.

We are very grateful to **Dr. Vijaya Kumar Koppula**, Dean-Academic, CMR College of Engineering and Technology, for his constant support and motivation in carrying out the project work successfully.

We are highly indebted to **Dr. V A Narayana**, Principal, CMR College of Engineering and Technology, for giving permission to carry out this project in a successful and fruitful way.

We would like to thank the Teaching & Non- teaching staff of Department of Computer Science and Engineering for their co-operation

Finally we express my sincere thanks to **Mr. Ch. Gopal Reddy**, Secretary, CMR Group of Institutions, for his continuous care. I sincerely acknowledge and thank all those who gave support directly and indirectly in completion of this project work.

E.SIDHARTHA(20H51A05C0)

G.MURALIDHAR (20H51A05C5)

P.SHREYANSH (20H51A05D2)

TABLE OF CONTENTS

CHAPTER NO.	TITLE	PAGENO
		.
	LIST OF FIGURES	II
	ABSTRACT	III
1	INTRODUCTION	1
2	BACKGROUND WORK	2
3	PROPOSED SYSTEM 3.1 Introduction 3.2 Description 3.3 System Requirements 3.4 Primary Goals	3-5 3 4 5 5
4	DESIGNING 4.1 Proposed Architecture 4.2 Screenshots of code and database	6-9 6 7-9
5	RESULTS AND DISCUSSION	10-13
6	CONCLUSION & FUTURE WORK	14
	REFERENCES	15

LIST OF FIGURES

FIGURE NO.	TITLE	PAGE NO.
4.1	PROPOSED ARCHITECTURE	6
4.2-4.1.7	SCREENSHOTS OF CODE AND DATABASE	7-12
5.1	WEBSITE	13
5.1.2	LOGIN/CREDENTIALS	14
5.1.3	COINTABLE AND SEARCHBAR	15
5.1.4	1 YEAR COIN DATA	16
5.1.5	WATCHLIST COIN	17

Abstract

Cryptocurrency is a Digital currency designed to work as medium of exchange through a computer network which is not reliant to maintain by a government or a bank. As the people get influenced by the internet for money, we want to encourage how crypto works. It prices need to be tracked there are various methods like use through the exchange but in some cases like hardware wallets or some wallets doesn't mention the price so for the problem. Our Team members came for a solution for the problem for the people who doesn't have a good application. This Mini Project is about a Crypto -tracker application made by using JavaScript & it's libraries like react, node etc. Here the part where user can see various coins, user can track the price of the coin from 24hrs to 1 year's price & user can add it to watchlist where the selected coins price only be shown. Chart.js will be used for application tracking the price using the chart, Material UI will be used for UI. Firebase authentication will be also added for analytics and security.

CHAPTER 1

INTRODUCTION

In recent years cryptocurrencies are hitting high day by day , we all know that cryptocurrency is a new revolution,. Cryptocurrency, sometimes called crypto-currency or crypto, is any form of currency that exists digitally or virtually and uses cryptography to secure transactions.

Cryptocurrencies don't have a central issuing or regulating authority, instead using a decentralized system to record transactions and issue new units. For every trader, a cryptocurrency tracker is one of the features that are very useful and needed. Cryptocurrency tracking machines usually work to provide information from all your exchanges and wallets. Every trader can see in a flash how the portfolio performance is shown through the tracking machine.

Crypto Tracker is a Web Application that helps crypto users to track their portfolio Which allows them to follow all the coins in the market where the user can see all types of Trending new coins too, all kinds of Coins data from 24hrs to 1year prices, User Can add it to the watchlist to see the specific Selected coins by Signup account using Gmail.

Users can log in through their different devices watch prices add to their accounts and watch their Portfolio. Our Proposal system is neat and clean & it's not complicated like the other websites, where user can get their work to done easily...

CHAPTER 2

BACKGROUND WORK

Cryptotrackers which are already existing solution they are mentioned below

1. CoinGecko - CoinGecko is a reliable and comprehensive resource for checking out the statistics and trends of hundreds of different coins. CoinGecko offers price graphs, market statistics, historical data, and a range of different charts for all the major coins, as well as the newer or less well-known coins, such as Chiliz or Milk Token.

2. Coinbase - Coinbase is known by many as a popular cryptocurrency exchange and software wallet, but it also offers key insights into hundreds of different cryptocurrencies. On the Coinbase “Prices” section, you can access a wide array of data on your chosen coin, including price charts, retention time, popularity, and trading activity.

3. Nomics - Nomics is a great option for checking all kinds of cryptocurrency statistics. Nomics provides information on a huge range of different crypto coins, from big names to market newbies. Nomics offers the standard coin price charts, as well as trading volume, market cap, and the specific supply number of coins in circulation. It also provides easy-to-read summaries on each coin, including its founders, release date, and more.

4. CoinMarketCap - This site is a great one-stop shop for key crypto coin data, including a crypto-to-USD price chart, trading volume, market cap, and overall market rank. Additionally, you can check out the top places to buy your desired coin if you're unsure where to get started.

There are many other websites who are provide the data of coins highly but the are set of drawbacks for some of sites where user can't access the data like for an example-

Wazirx the Indian crypto tracker have several issues where lot's of errors occur while checking the data and major of sites only show's USD currency but we by using Coin Gecko API for info we can use INR too.

CHAPTER 3

PROPOSED SYSTEM

3.1 INTRODUCTION

A Crypto Tracker is built using JavaScript and its Library React using Coin Gecko Api To tracks the coins prices within time. This Approach helps the user to track and add The coins to the watchlist to track their portfolio. All the Mandatory things used to track the coins from the specific time. So, While using the Existing systems we found a Major drawback the thing is login system & UI it's complicating the things like asking the whole credentials and things like Gmail, name, address which isn't essential at all our plan is just signup with your Gmail and setup the password. For the account created User Interface we are using Material UI where the clean and sleeky designs are added & ChartsJS plays an important role in the application By the information of the Coin Gecko API which we retrieved needs to be converted into the converted into a chart , so charts a JavaScript library is used for this task and after all of this The process for storing the data Firebase is used the best NoSQL database where the watchlist of coins are stored and for security authentication and deployment hosting services vertical is used.

3.2 DESCRIPTION

The proposed system develops gives a certain coin price data which can have Accurate classification of data from coin carousel.js and for API retrieve it from Coin gecko, but all before this all the creating the coin details from cryptocontext.js file and Coinpage.js & I coin's table.js all the coins will present in it. For Authentication.jsAuth.js,Login.js,Signup.js will be used for credentials information.Api.js and data.js contains crypto info from Coin Gecko. For storing the watchlist coins firebase.js is used to store the coin info in a database, and all of the main point index.html were naming the file and website takes place. After the coin tracking is over you can remove the coin from watchlist.

3.3 SYSTEM REQUIREMENTS

HARDWARE REQUIREMENTS:

PROCESSOR: DUAL CORE 2 DUOS and above

RAM: 2GB DD HARD DISK: 250 GB

SOFTWARE REQUIREMENTS:

OPERATING SYSTEM: WINDOWS 8/8.1/10/11, MACOS, LINUX.

PLATFORM: VISUAL STUDIO CODE

PROGRAMMING LANGUAGE: JAVASCRIPT

3.4 PRIMARY GOALS

- Build the website from JavaScript (React Framework)
- Add the coin table using the context API because it's lightweight and easy to use
- Use the data by adding Api.js by taking the links from Coin gecko API
- Using Chartjs to prices and adding a button called watchlist.
- Authentication for Login/Signup for storing coin data from firebase.

CHAPTER 4

DESIGNING

4.1 PROPOSED ARCHITECTURE

The proposed solution uses a unique approach for Crypto coin prices.

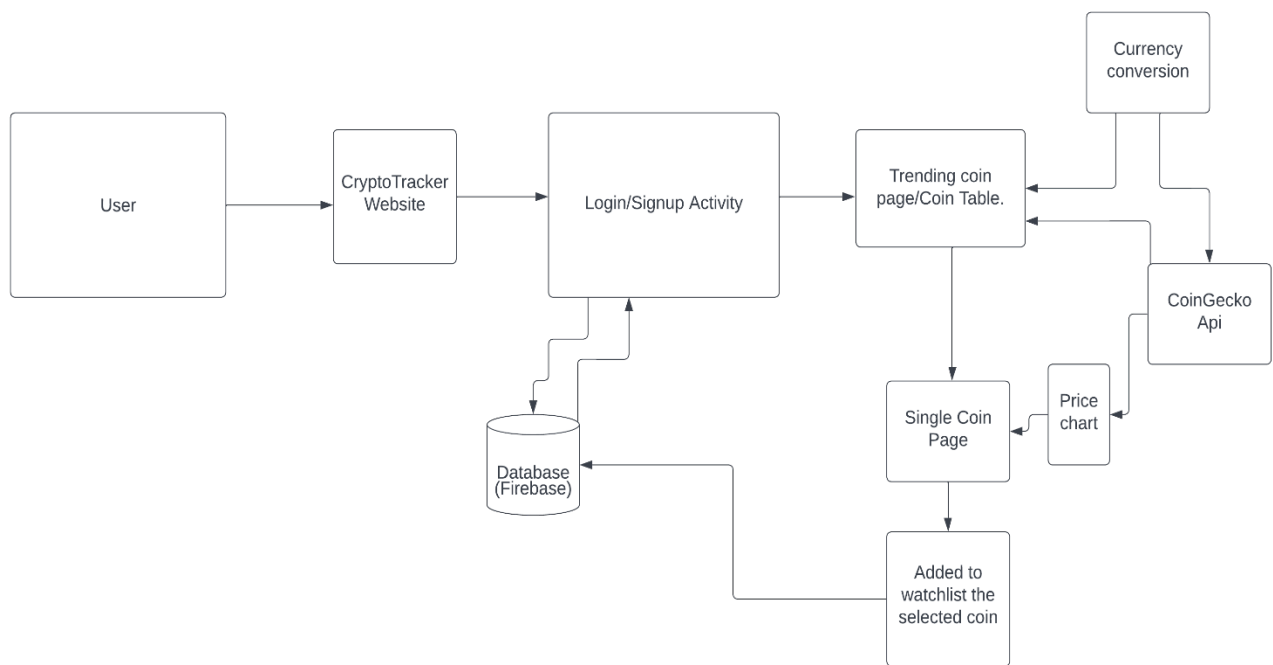
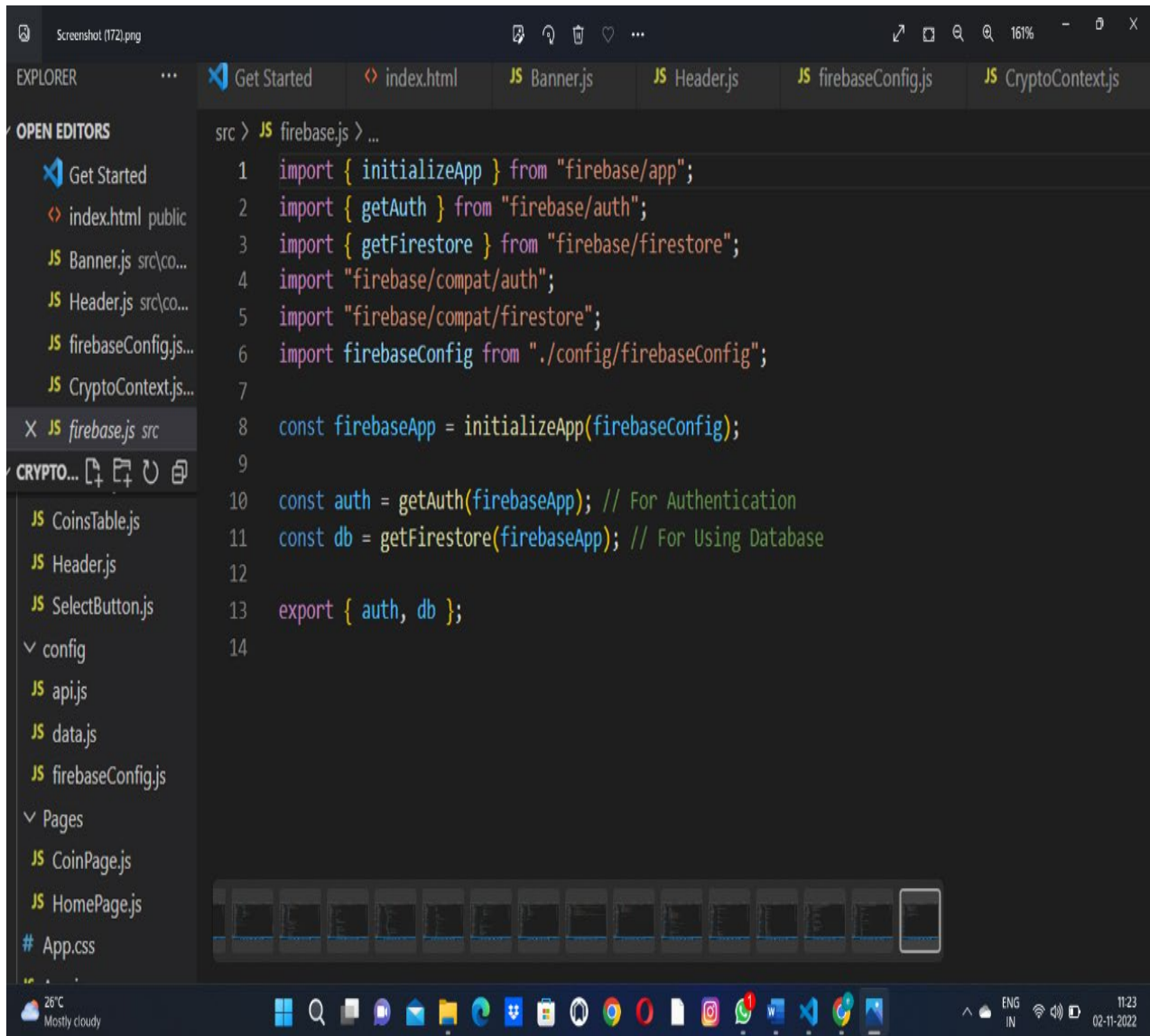


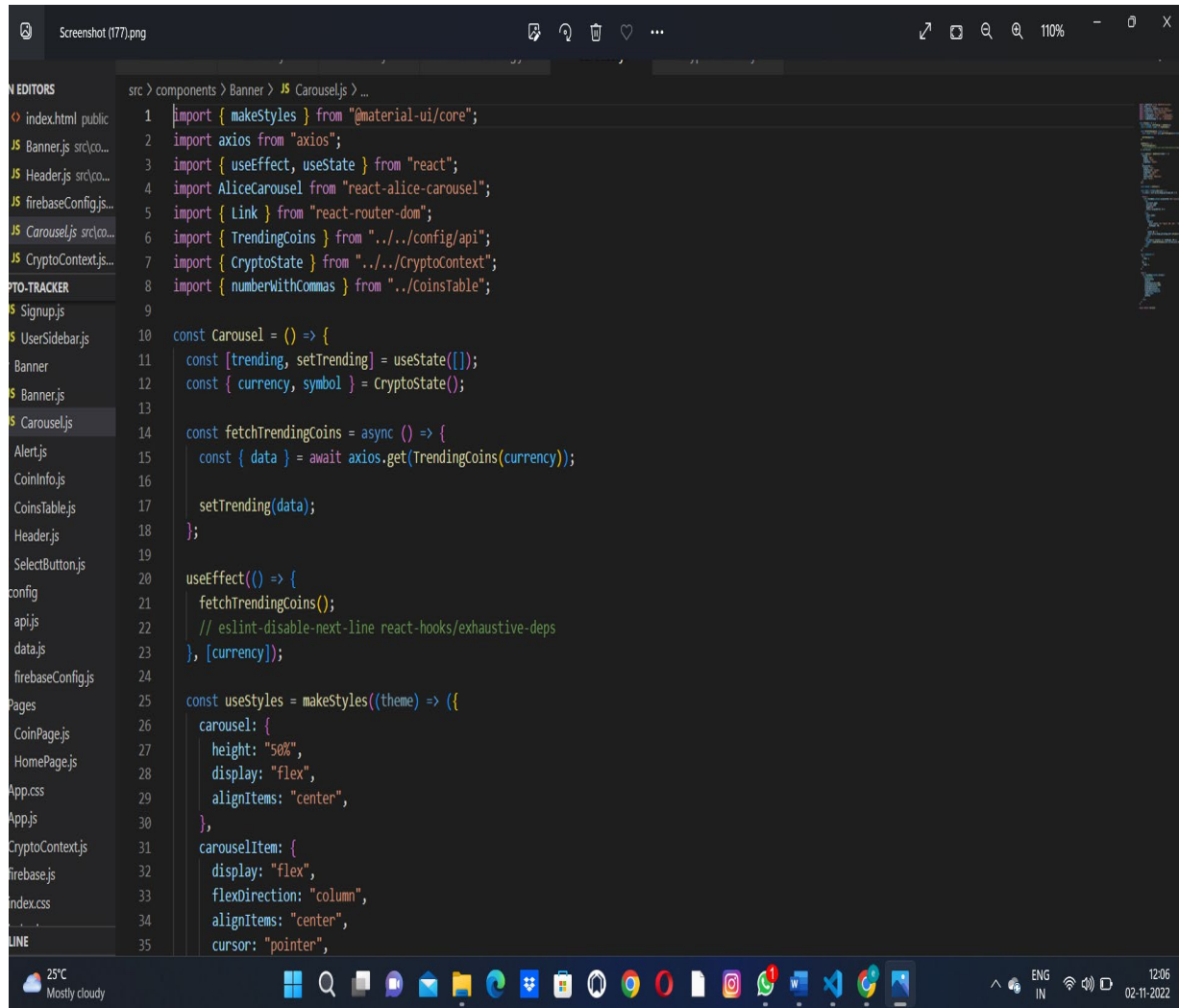
Figure 4.1- the below figure represents the architecture of Crypto Tracker.

4.2 Screenshots of code and database



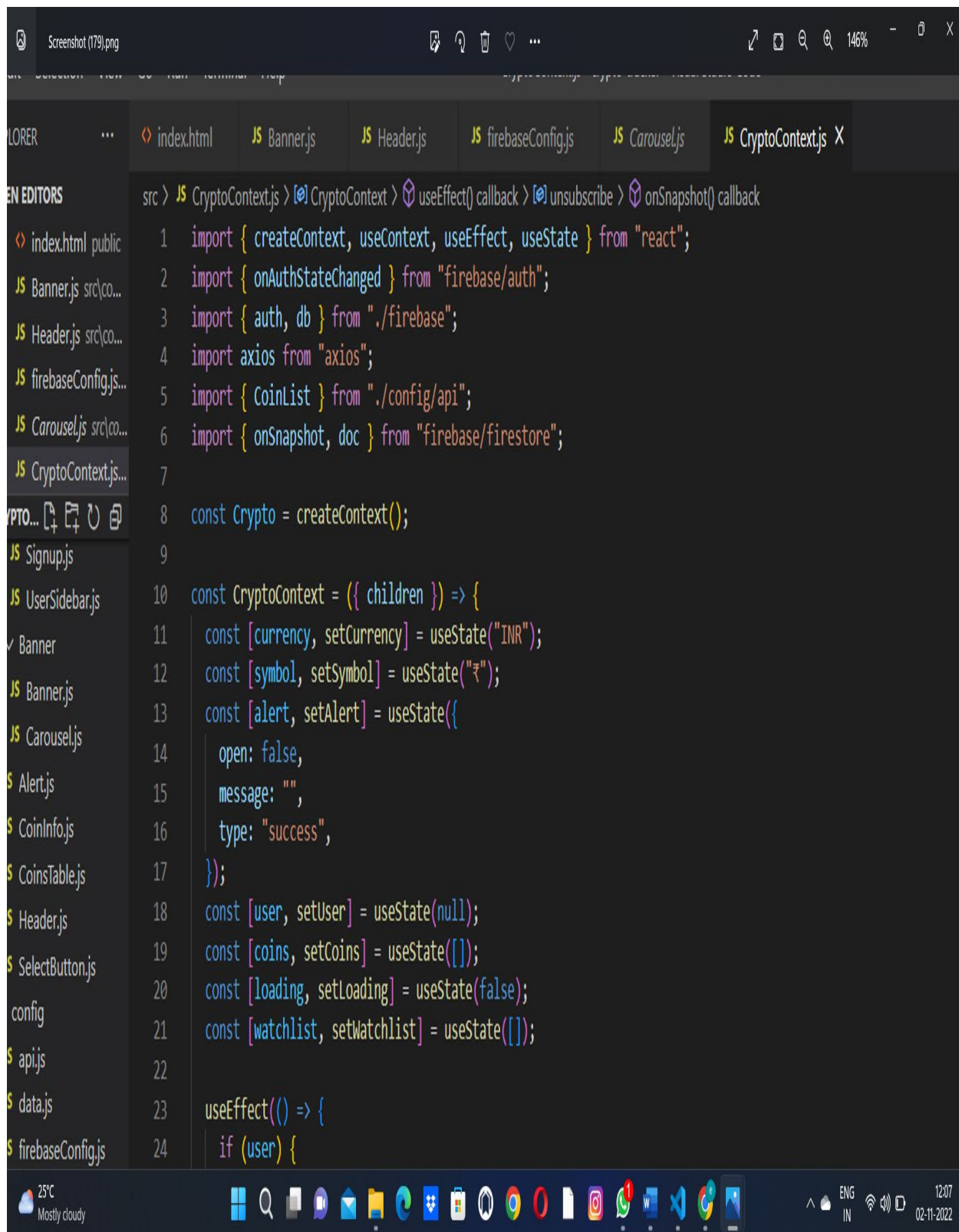
```
src > JS firebase.js > ...
1  import { initializeApp } from "firebase/app";
2  import { getAuth } from "firebase/auth";
3  import { getFirestore } from "firebase/firestore";
4  import "firebase/compat/auth";
5  import "firebase/compat/firestore";
6  import firebaseConfig from "./config/firebaseConfig";
7
8  const firebaseApp = initializeApp(firebaseConfig);
9
10 const auth = getAuth(firebaseApp); // For Authentication
11 const db = getFirestore(firebaseApp); // For Using Database
12
13 export { auth, db };
14
```

4.1.2-Firebase config



```
src > components > Banner > JS Carousel.js > ...
1  import { makeStyles } from "@material-ui/core";
2  import axios from "axios";
3  import { useEffect, useState } from "react";
4  import AliceCarousel from "react-alice-carousel";
5  import { Link } from "react-router-dom";
6  import { TrendingCoins } from "../../config/api";
7  import { CryptoState } from "../../CryptoContext";
8  import { numberWithCommas } from "../CoinsTable";
9
10 const Carousel = () => {
11   const [trending, setTrending] = useState([]);
12   const { currency, symbol } = CryptoState();
13
14   const fetchTrendingCoins = async () => {
15     const { data } = await axios.get(TrendingCoins(currency));
16
17     setTrending(data);
18   };
19
20   useEffect(() => {
21     fetchTrendingCoins();
22     // eslint-disable-next-line react-hooks/exhaustive-deps
23   }, [currency]);
24
25   const useStyles = makeStyles((theme) => ({
26     carousel: {
27       height: "50%",
28       display: "flex",
29       alignItems: "center",
30     },
31     carouselItem: {
32       display: "flex",
33       flexDirection: "column",
34       alignItems: "center",
35       cursor: "pointer",
```

4.1.3-Carousel.js



```
src > JS CryptoContext.js > [?] CryptoContext > [?] useEffect() callback > [?] unsubscribe > [?] onSnapshot() callback

1 import { createContext, useContext, useEffect, useState } from "react";
2 import { onAuthStateChanged } from "firebase/auth";
3 import { auth, db } from "../firebase";
4 import axios from "axios";
5 import { CoinList } from "../config/api";
6 import { onSnapshot, doc } from "firebase/firestore";
7
8 const Crypto = createContext();
9
10 const CryptoContext = ({ children }) => {
11   const [currency, setCurrency] = useState("INR");
12   const [symbol, setSymbol] = useState("₹");
13   const [alert, setAlert] = useState({
14     open: false,
15     message: "",
16     type: "success",
17   });
18   const [user, setUser] = useState(null);
19   const [coins, setCoins] = useState([]);
20   const [loading, setLoading] = useState(false);
21   const [watchlist, setWatchlist] = useState([]);
22
23   useEffect(() => {
24     if (user) {
```

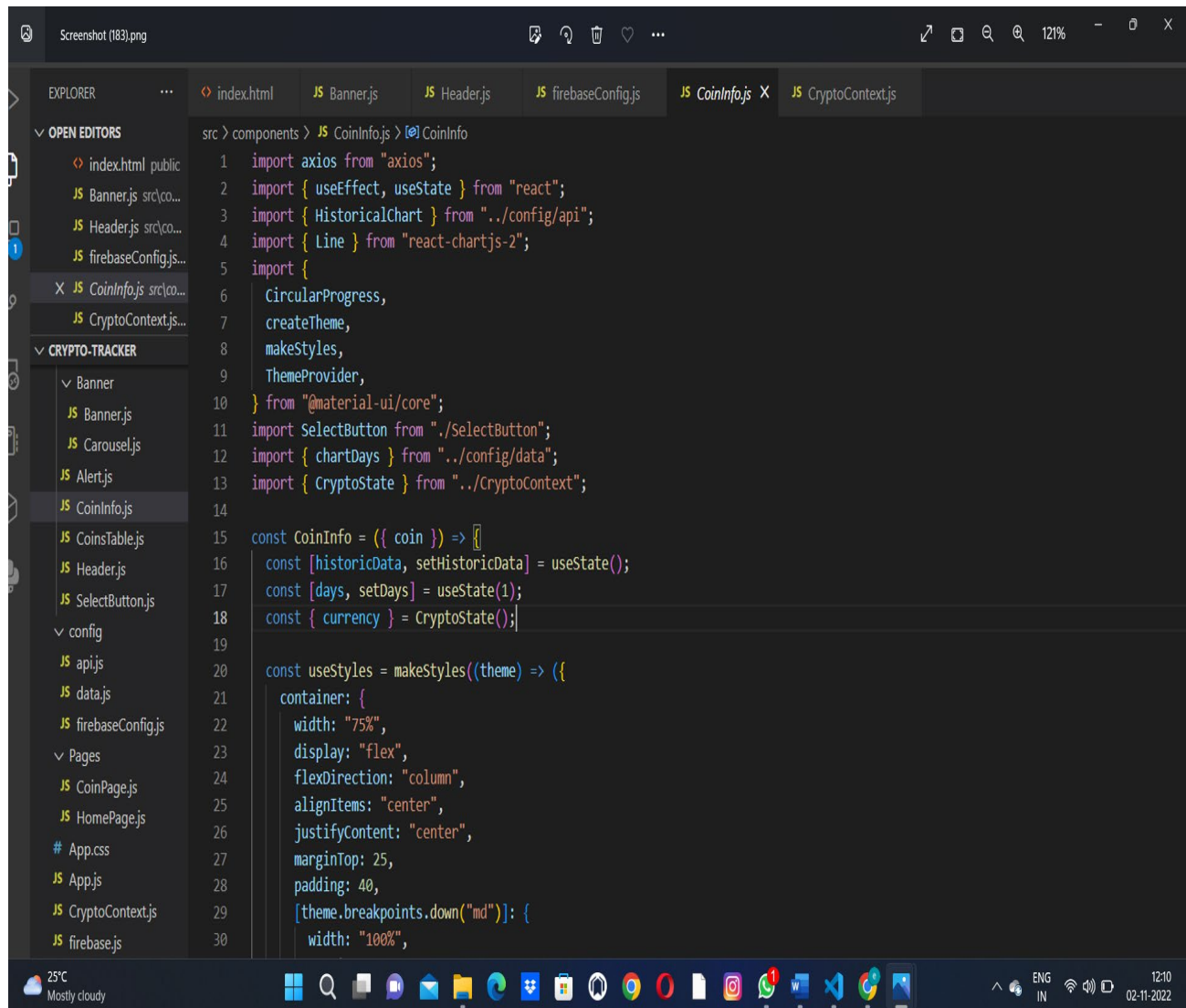
4.1.4-Crypto-Context.js

The screenshot shows the Visual Studio Code editor interface. The title bar at the top reads "firebase.js - crypto-tracker - Visual Studio Code". The menu bar includes "File", "Edit", "View", "Go", "Run", "Terminal", and "Help". The Explorer sidebar on the left shows a file tree with "index.html" and several JavaScript files: "Banner.js", "Header.js", "firebaseConfig.js", "firebase.js", and "CryptoContext.js". The "firebase.js" file is currently selected and open in the editor. The code in the editor is as follows:

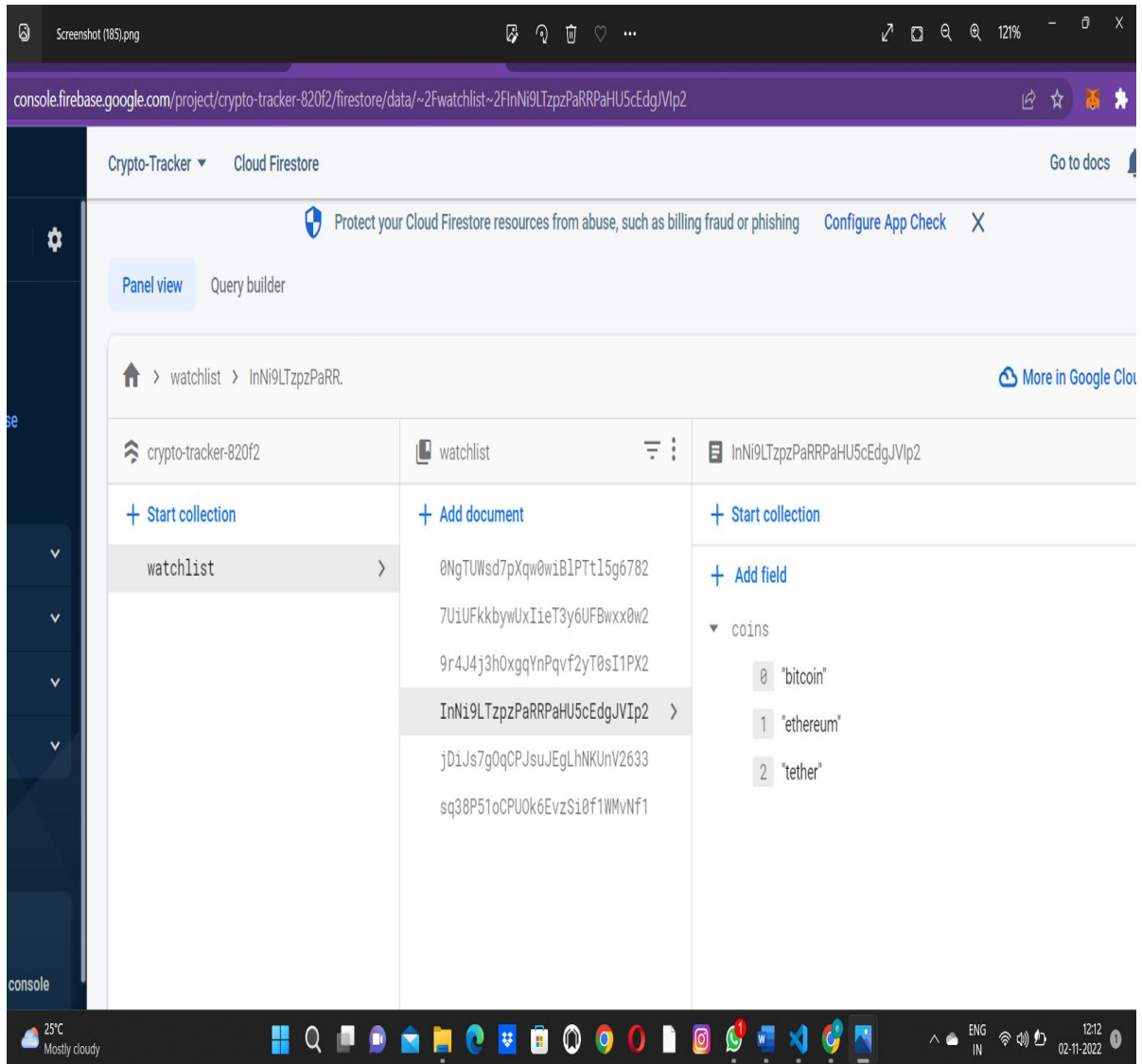
```
src > JS firebase.js > ...
1  import { initializeApp } from "firebase/app";
2  import { getAuth } from "firebase/auth";
3  import { getFirestore } from "firebase/firestore";
4  import "firebase/compat/auth";
5  import "firebase/compat/firestore";
6  import firebaseConfig from "../config/firebaseConfig";
7
8  const firebaseApp = initializeApp(firebaseConfig);
9
10 const auth = getAuth(firebaseApp); // For Authentication
11 const db = getFirestore(firebaseApp); // For Using Database
12
13 export { auth, db };
14
```

At the bottom of the editor, there is a preview window showing a grid of application screenshots. The Windows taskbar at the very bottom displays the system clock as 12:09 on 02-11-2022, along with various system icons and application shortcuts.

4.1.5-FireBase.js



4.1.6-CoinInfo.js

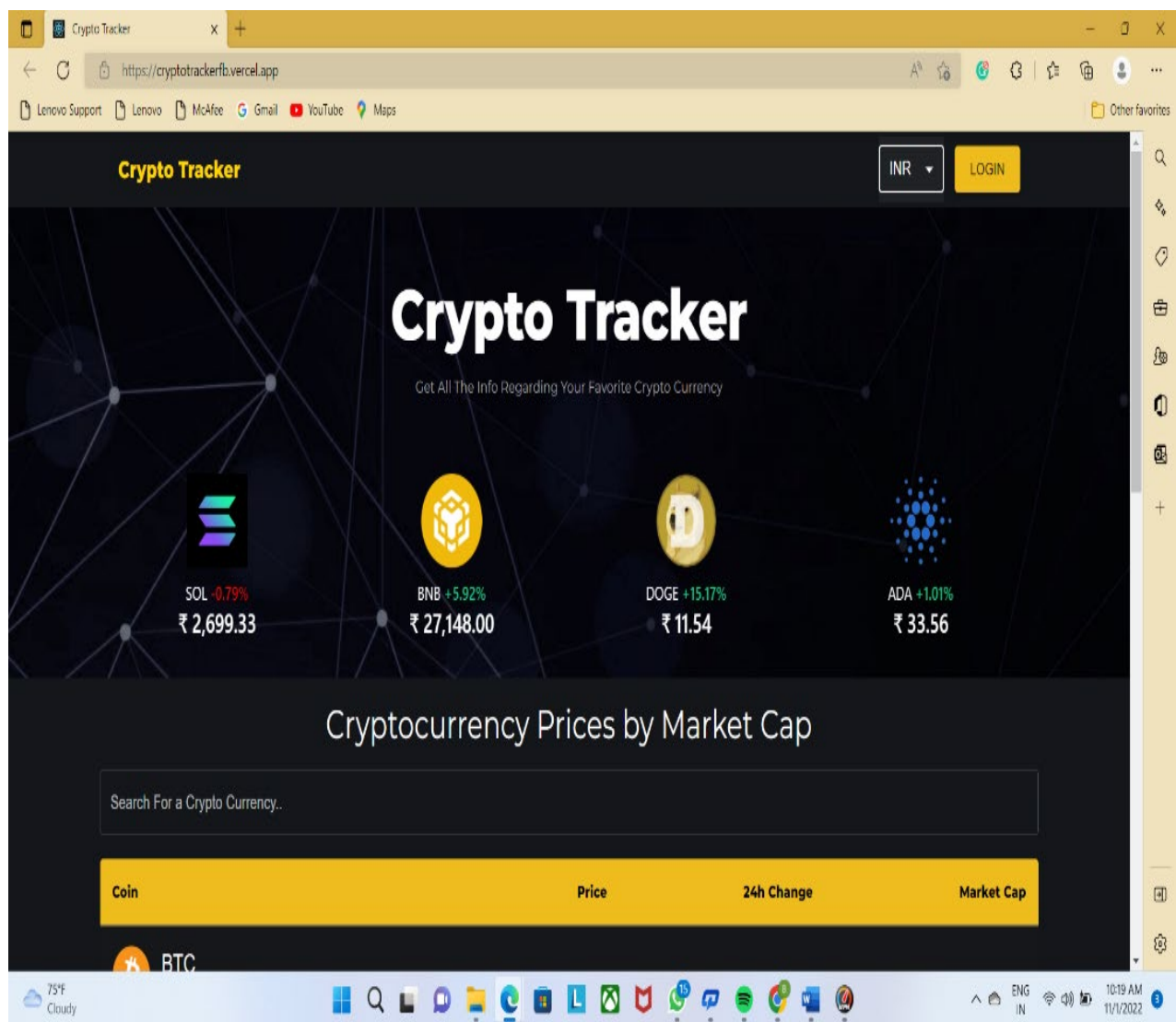


4.1.7-Cloud Fire store

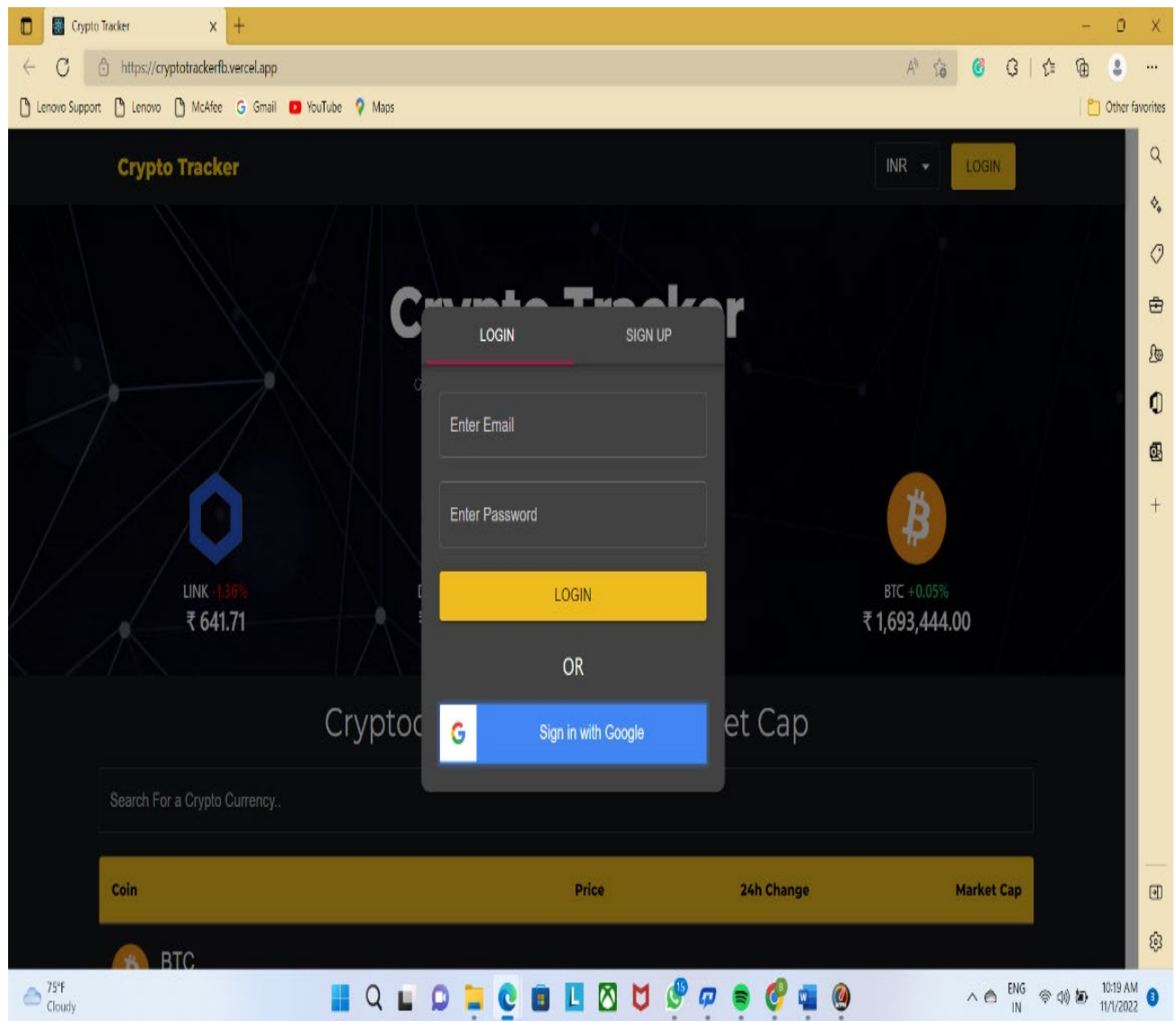
CHAPTER 5

RESULTS AND DISCUSSION







The Pictures shown below are executed process of the project, that's the crypto tracker Website.



Screenshot 5.1-Website



Screenshot 5.1.2-Login/signup credentials

Coin	Price	24h Change	Market Cap
 BTC Bitcoin	₹ 1,697,145.00	+0.14%	₹ 32,580,979M
 ETH Ethereum	₹ 131,530.00	+0.31%	₹ 15,854,307M
 USDT Tether	₹ 82.70	-0.12%	₹ 5,742,635M
 BNB BNB	₹ 27,010.00	-0.92%	₹ 4,410,089M
 USDC USD Coin	₹ 82.74	+0.03%	₹ 3,558,513M
 XRP XRP	₹ 38.08	+0.09%	₹ 1,908,253M

Screenshot 5.1.3-Coins table and search bar for coins



Screenshot 5.1.4-1 year price chart



Screenshot 5.1.5-Coins which are added to the watchlist

whole point here is how the Crypto coin prices are accurate and the website in Minimal, neat, and sleekly design which makes users use it effortlessly as the new coins Which are added in Coin Gecko and also available in the Crypto Tracker Website

CHAPTER 6

CONCLUSION AND FUTURE WORK

CONCLUSION:-

Crypto Tracker website is a really interesting topic & new topic for the person who is Freshers or experienced person in it. Cryptocurrency, Blockchain these topics are going to rule for the next generation web 3.0 applications can be updated with new Features and this website can run on any os like windows, mac, and Linux.

FUTURE WORK We also want to add wallets like metamask,coinbase,opensea, and Wazir which work Like a crypto exchange and have more features currently we only added two currencies But more will be shown in future updates.

REFERENCES

REFERENCES

- [1]. <https://reactjs.org/docs/create-a-new-react-app.html>
- [2] <https://youtu.be/PkZNo7MFNFg>
- [3].[Material-UI: A popular React UI framework \(mui.com\)](https://mui.com/)
- [4]. <https://youtu.be/fgdpvwEWJ9M>
- [5]. [Chart.js | Chart.js \(chartjs.org\)](https://chartjs.org/)
- [6]. <https://youtu.be/b9eMGE7QtTk>