

# Web App for Tracking Real-Time Performance of Cryptocurrencies

Ms. Archana Nikose, Anjali Vaidya, Srushti Lokhande, Aman Punekar, Rashmi Jadhav

Department of Computer Science and Engineering, Priyadarshini Bhagwati College of Engineering, Nagpur, Maharashtra, India

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## ABSTRACT

Cryptocurrency is money that exists in digital or virtual form. Cryptocurrencies do not have a central issuance or regulatory authority, but instead use a decentralized system to record transactions and issue new units. Cryptocurrencies are a secure and popular standardized way to transact anywhere on earth with relatively low fees. This article provides an overview of what cryptocurrency is and begins to answer some of the most common questions asked by newcomers. Nowadays, everyone wants to explore and invest in the crypto market due to its high volatility and higher returns. Cryptocurrencies are inherently volatile because their prices change rapidly. Therefore, we thought of creating a platform to track the performance of cryptocurrencies. The platform will track the performance of cryptocurrencies and provide information on changes in the value of cryptocurrencies. Our results will provide users with the necessary information, including the real-time data of cryptocurrencies in visual form like Graphs or Charts, so that they can decide whether to invest in them. We also provide various tools to facilitate the decision-making process of investing in the crypto market.

**Keywords :** Cryptocurrency Performance Tracker, Encrypted, Currency, Blockchain, Trading, Decentralized, Crypto coins.

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## I. INTRODUCTION

A cryptocurrency is a type of digital currency which is designed to operate as a medium of exchange on a computer network and does not depend on any central authority (such as a government or bank) to maintain or maintain it. It is a decentralized system for verifying that parties to a transaction have the funds they claim

to have, removing the need for traditional intermediaries such as banks when transferring funds between two entities. Individual coin ownership records are stored in a digital ledger, a computerized database that uses strong cryptography to protect transaction records and control the creation of additional coins.

Cryptocurrencies do not exist in physical form (like banknotes) and are generally not issued by a central authority. Cryptocurrencies typically use decentralized control, rather than central bank digital currency (CBDC). When it comes to cryptocurrencies, investors typically spend a lot of time researching the newest coins: those with the most exciting prospects or those with the most undervalued value. Smart investors also review different cryptocurrency exchanges, apps, and services to maximize their investment potential. However, people who invest time and money in the cryptocurrency space rarely spend enough time considering the impact of digital currency price trackers on their experience.

The main purpose of this study is to provide information for those unfamiliar with cryptocurrencies. It is suitable for those who wish to invest online while managing economic operations such as buying, selling and trading. "Cryptofit" appears as a cryptocurrency advisor or analytical tool in this study. This is a web-based project developed using JavaScript programming language and Angular JS framework.

## II. RELATED WORK

Investors spend a lot of time trying to sift through the latest coins to find the hottest or cheapest cryptocurrencies. There is a wide selection of cryptocurrency exchanges, apps, and other services suitable for investors looking to maximize their return on investment. Using a digital currency price tracker can make or break your cryptocurrency trading experience, but only a small percentage of people who trade crypto realize its importance.

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on investment. Using a digital currency price tracker can make or break your cryptocurrency trading experience, but only a small percentage of people who trade crypto realize its importance. Saransh Bhardwaj [3] presents the platform which track the performance of cryptocurrencies and provide information on changes in the value of cryptocurrencies. The platform they have built gives us insight into the performance of cryptocurrencies with an attractive UI which is updated every day, and includes price changes over a period of 24 hours and 1 week. Their main objective of creating this platform is to provide easy access to crypto insights [2][3]. Article explains what cryptocurrency is and begins to answer some of the most common questions asked by beginners. To understand why Bitcoin is what it is, you must first understand the fundamental issues of cryptocurrency [8][6].

An application where it displays live exchange rates of different cryptocurrencies in the application [1]. By using the app in their project, anyone can get necessary updates and information on various cryptocurrencies. The ultimate goal of the project is to provide price updates from time to time about cryptocurrencies.

## III. PROPOSED SCHEME

This section explains the development plan for this web application to track the real-time performance of cryptocurrencies and the methods it uses. The technology chosen for the development of this project is the latest in the industry, increasing the functionality and productivity of the application. The project contains various files, each of which implements a specific function in the application. Since Angular is the main technology used in this project, this project uses the folder structure provided by Angular. For data retrieval

purposes, the public API provided by Coingecko is used. This allowed us to recover the raw data and then

apply the Javascript functions necessary for the process of extracting and viewing the information of the different Cryptocurrencies.

The proposed solution is to implement the Angular Material UI component library to create an online cryptocurrency price and performance tracking platform. The proposed scheme proposes to build interface components. It helps to design applications in a structured manner. Its components help in creating attractive, consistent and functional web pages and web applications. It is used to create more responsive websites. Responsive, scalable, high-quality, versatile and frictionless design using various features of Angular. The first module concerns the design of the dashboard. The dashboard interface is made up of several components that we applied using the Angular Material UI javascript component library.

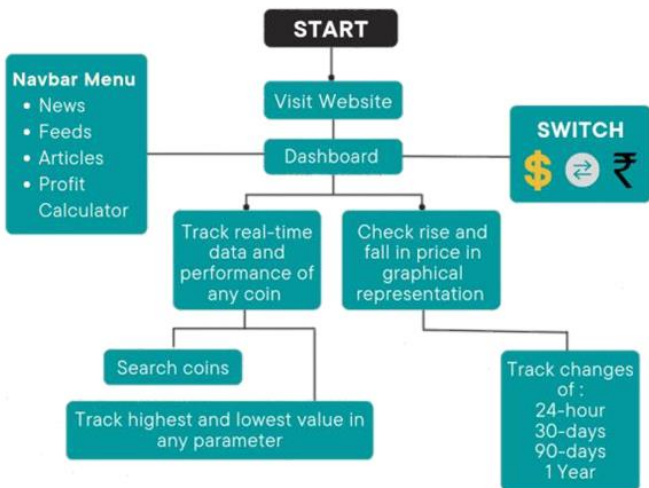


Figure 1 : Tools, Functionality and Interfaces provided by Web App.

The first component is the header, which contains a drop-down list that helps the user select a currency type. The user can select a currency type between INR or USD values. This is achieved by using the money channel function, which is a function of the Ng module. If the user chooses the INR value, he will only see the prices of all tokens in the INR value, which is the same as the USD value. Then another component displays a

banner with trending coins in the market representing their respective market prices in real time.

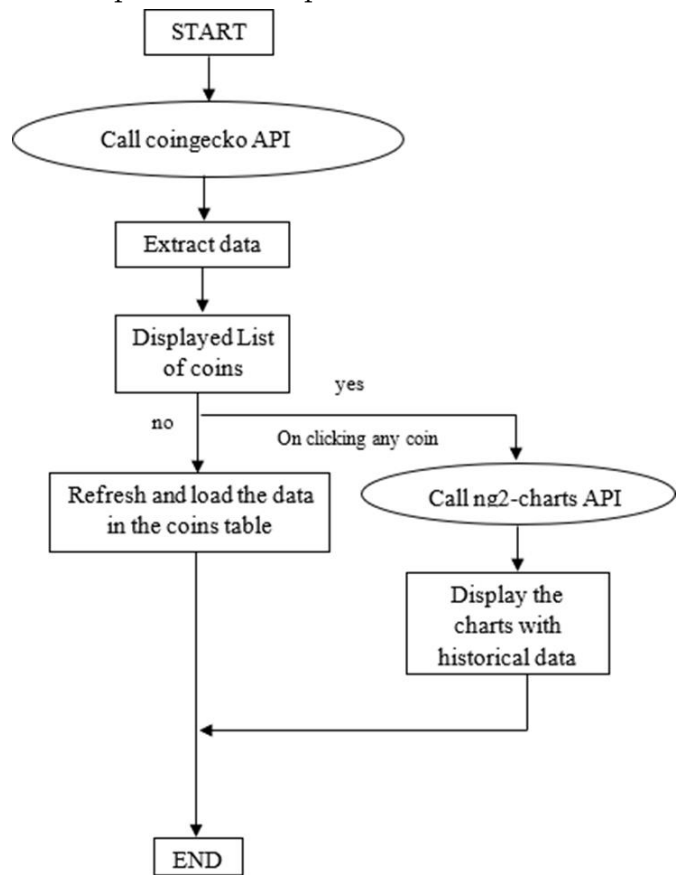


Figure 2 : Data flow diagram of the system

To classify a hundred elements, we implement pagination. This is done using the paging function of the pads. A component that allows navigation between information being browsed. Displays the current page size, a user-selectable option to change this size, the item displayed, and navigation buttons to go to the previous or next page. Searching for a user-selected part from a list of hundreds of parts can be time consuming. To solve this search problem, a search tool is provided, which is implemented with an Angular function called mat-table filter. It is a property contained in MatTableDataSource or Angular Material. If we assign a search input value to this filter property, the table rows will be automatically filtered. Now create a table with a list of all parts. The table was created using the mat-table module. This is done using an API that shares this data from widgets. We use APIs to fetch real-time data from various cryptocurrencies

and convert the data into tabular and graphical representations. Charts help us visualize large amounts of data in an easy to understand and interactive way. Users can hover over the chart to see the coin's value on any date or for any time period. Chart.js is a popular javascript chart library for creating charts from large amounts of data. We've added tools for investors to help them make informed investment decisions.

Added news, feeds, articles and a profit calculator. People check out news, feeds, and articles about cryptocurrencies and investment methods and techniques. Profit Calculator is a very useful tool for investors to perform calculations before selling tokens. They can calculate the investment profit of it by filling in the required fields.

#### IV. RESULTS

After deploying our application to the host, we got a number of findings and results which will be discussed in this section. After extensive testing and finding bugs, our app works as expected.



Figure 3: Dashboard of the Web App

The results present data obtained from the site coingecko.com. Filters are applied in such a way that the raw data is filtered out and only the desired data is displayed. HTML is also used to create pages and SCSS is used to apply styles to the created structure. Both technologies provide a user-centric experience.

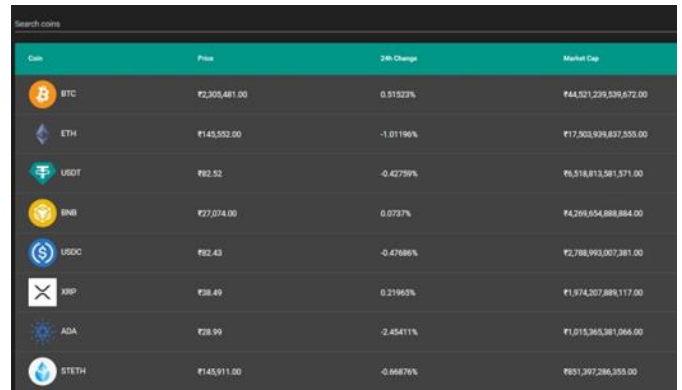


Figure 4 : List of Cryptocurrencies

After clicking on any cryptocurrency in the list, a graph will be displayed in the results. This is a real-time chart of cryptocurrency prices. Shows all the details of its price, as well as the rise and fall of its exchange rate.

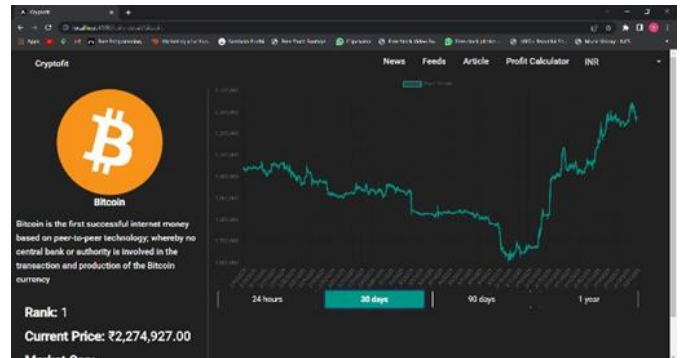


Figure 5 : Live chart of Bitcoin prices from last 30 days



Figure 6 : Various Tools in Nav-bar



Figure 7 : Profit & Loss Calculator

## V. CONCLUSION

We can finally conclude that in this project, we were able to successfully develop an encrypted tracking application using AngularJS along with other advanced technologies. This is something we can say with certainty right now. The project stands out from other projects in this area by the intuitiveness of its graphical interface. Tracking real-time cryptocurrency data has become easier and investment decisions have become easier. Generates a live graph with updated values. Users make decisions based on past historical data. They can get data for the last 24 hours, 30 days, 3 months or even 1 year.

Users can research using the tool and at the same time make an informed decision to invest in any cryptocurrency. Tools like news, feeds, articles, and more. A profit calculator has been introduced in the project to calculate the profit they will receive after investing.

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