



CRYPTOLYTICS

[Crypto-Currency Analytics]

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Project Title: CRYPTOLYTICS



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Project Report



CERTIFICATE

**This is to certify that the practical / term work carried out in the
subject of**

ADVANCED TECHNOLOGY and recorded in this journal is

the bonafide work of

**MAHARSHI MISTRY[CE004] of B.Tech semester V in the
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Abstract:

We have built a website which provides the user with all the data of cryptocurrency coins. It provides with the statistical data regarding the past and the current behaviour of a coin. And based on that it also shows the prediction of the future behaviour of the coin. All this data together helps the user to create an analytical overview before trading in any coin.

Introduction:

Trading in cryptocurrency is evolving as one of the most common way to invest finance now a days. But investment in such field where prices are fluctuating and have an uncertain curve at every moment requires a proper analysis. There is a constant risk factor in such fields. But a lot of data is required to analyse a crypto coin. And collecting data from different source is a time consuming and messy task. Thus, many a times investor makes an inappropriate or unfair investment without proper analysis of a coin and ends up with a loss. Thus, lack of analysis due to time consumption and mess to gather data creates a problem in trading.

❖ **Technology and Tools Used:**

◆ **Technology:**

- > React
- > JavaScript
- > Chart JS
- > HTML
- > CSS

◆ **Tools:**

- > Git
- > Visual Studio Code
- > Node Package Manager
- > React Styled components
- > Material UI

Software Requirement Specifications:

❖ Scope:

- > This system is designed for gaining some knowledge about the existing field of crypto currency in the current world.
- > Specially to analyse the behaviour of a crypto coin using the past and the current data and future predictions for trading purpose.

❖ System Functional Requirements:

- > **R1. Tracking crypto coins:**

- **R1.1: According to trending coins**

Description: Statistics of current trending cryptocurrency based on timeframe will be displayed.

Output: Statistics of coins

- **R1.2: Information about coin**

Description: When a user clicks on a particular coin, user can see the market cap, price and graphical data of that coin.

Input: Click Event

Output: Statistics of coins

> **R2. Display Price Statistics:**

- **R2.1: View Current Price**

Description: The user will be able to see the current price of any coin.

Input: Select Coin

Output: Coin Price

R2.2: View Past Price

Description: The user will be able to see the Past price of any coin

Input: Select Coin

Output: Coin Price

R2.3 : View All time high Coin

Description: The user will be able to see all time high coin.

[R2.3 : View All time low Coin](#)

Description: The user will be able to see all time low coin.

> **R3. View Events of crypto coin:**

- [R3.1: Display Past & upcoming future events](#)

Description: The user can see upcoming and past event.

- [R3.2: Source of future events](#)

Description: The user can see the source of the specific events.

Input: Click Event on Source button

Output:

❖ **System Non-Functional Requirements:**

1. Performance:

The system must be interactive and must not involve long delays. Though in case of opening the app components or loading the page the system shows the delays less than 2 seconds.

2. Safety

The users' data is highly personal. The system has authorization to avoid any un-authorized access to user's private data.

3. Reliability

As the system has personal data, its reliability is the major factor for consideration.

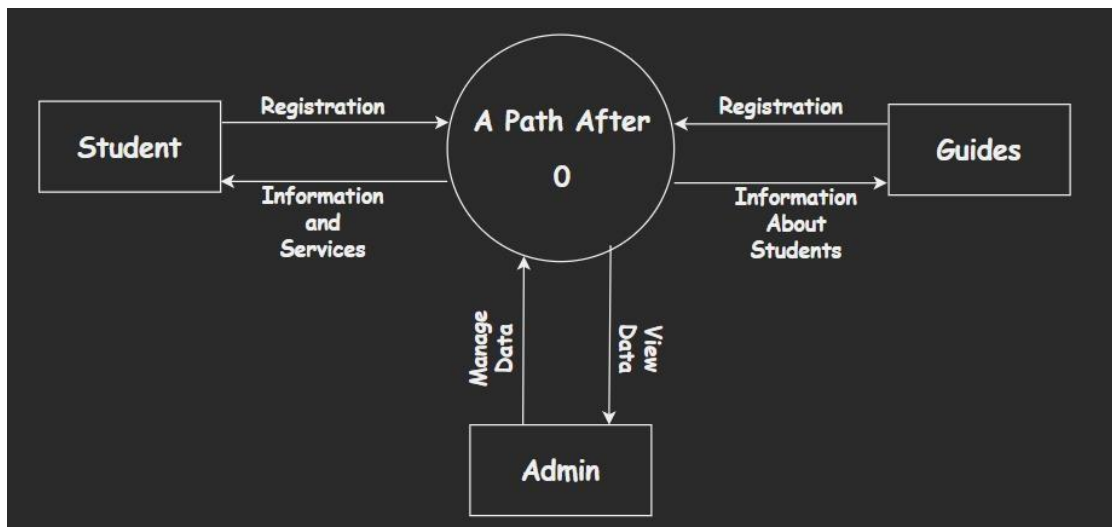
4. Accuracy

The system must provide with proper and accurate data with respect to crypto coins.

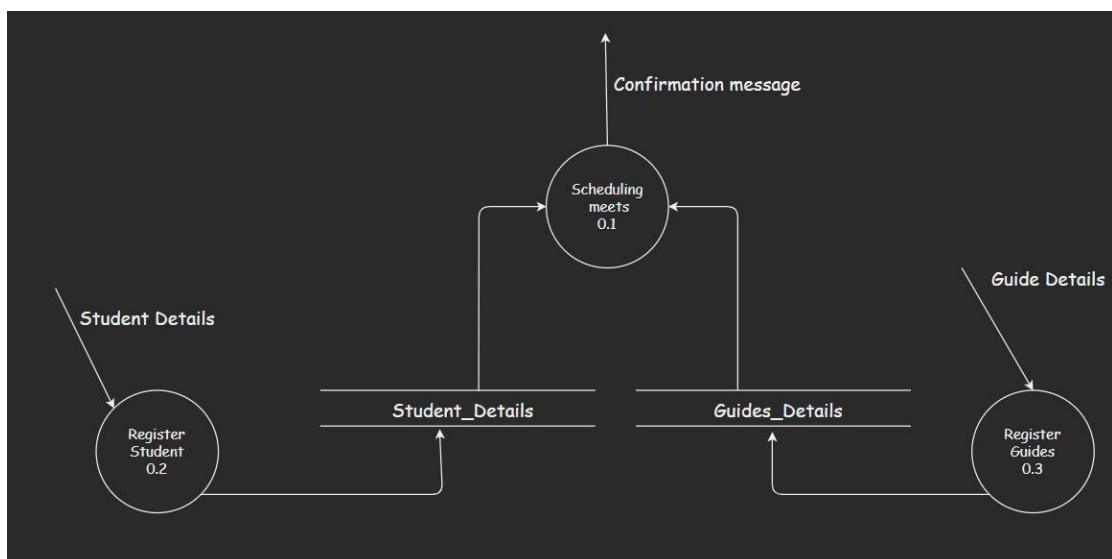
Design:

❖ DFD:

Level-0:



Level-1:



❖ **Data Dictionary:**

-As the data is directly imported from API there is no database used in website.

Implementation Details:

> Module:

1. Index: This module shows overview of crypto coins in listed manner and acts as a home page and allows the user to navigate through other different modules of websites.
2. Coin page: In this module user can get detailed statistics related to all the coins or one particular coin. The data contain all time high & low, market cap, current price, etc

> Function Prototypes:

1. Index page :

```
import React,{useState} from "react";  
import Footer from "../components/Footer";  
import HeroSection from "../components/HeroSection";  
import InfoSection from "../components/InfoSection";  
import {
```

```

homeObjOne,
homeObjThree,
homeObjTwo,
} from "../components/InfoSection/Data";
import Services from "../components/Services";
import CryptoStats from "../components/CryptoStats";
import Sidebar from "../components/Sidebar";
import Navbar from "../components/Navbar";

const Home = () => {
  const [isOpen, setIsOpen] = useState(false);

  const toggle = () => {
    setIsOpen(!isOpen);
  };

  return (
    <>
    <Sidebar isOpen={isOpen} toggle={toggle} />
    <Navbar toggle={toggle} />
    <HeroSection />
    <CryptoStats />
    <InfoSection {...homeObjOne} />
  )

```



```

<InfoSection {...homeObjTwo} />

<Services />

<InfoSection {...homeObjThree} />

<Footer />

</>

);

};

export default Home;

```

2. Guides creating his/her profile with Login:

```

import React, { useState,useEffect } from "react";
import Footer from "../components/Footer";
import NavbarCoin from "../components/NavbarCoin";
import { createTheme, LinearProgress, makeStyles,
Typography } from "@material-ui/core";
import axios from "axios";
import { useParams } from "react-router-dom";
import ReactHtmlParser from "react-html-parser";
import CoinInfo from "../components/CoinInfo";
import { SingleCoin } from "../config/api";
import { numberWithCommas } from
"../components/CryptoStats/CoinTable";
import { CryptoState } from "../CryptoContext";

```

```

const CoinPage = () => {
  const [isOpen, setIsOpen] = useState(false);

  const toggle = () => {
    setIsOpen(!isOpen);
  };

  const { id } = useParams();
  const [coin, setCoin] = useState();

  const { currency, symbol } = CryptoState();

  const fetchCoin = async () => {
    const { data } = await axios.get(SingleCoin(id));

    setCoin(data);
  };

  useEffect(() => {
    fetchCoin();
    // eslint-disable-next-line
    react-hooks/exhaustive-deps
  }, []);

  const useStyles = makeStyles((theme) => ({
    container: {
      display: "flex",
      [theme.breakpoints.down("md")]: {
        flexDirection: "column",

```

```
      alignItems: "center",
    },
  },
  sidebar: {
    width: "30%",
    [theme.breakpoints.down("md")]: {
      width: "100%",
    },
    display: "flex",
    flexDirection: "column",
    alignItems: "center",
    marginTop: 25,
    borderRight: "2px solid grey",
  },
  heading: {
    fontWeight: "bold",
    marginBottom: 20,
    fontFamily: "Montserrat",
  },
  description: {
    width: "100%",
    fontFamily: "Montserrat",
    padding: 25,
    paddingBottom: 15,
    paddingTop: 0,
    textAlign: "justify",
  },
  marketData: {
    alignSelf: "start",
```

```
padding: 25,
paddingTop: 10,
width: "100%",
[theme.breakpoints.down("md")]: {
  display: "flex",
  justifyContent: "space-around",
},
[theme.breakpoints.down("sm")]: {
  flexDirection: "column",
  alignItems: "center",
},
[theme.breakpoints.down("xs")]: {
  alignItems: "start",
},
},
));
```

```
const darkTheme = createTheme({
  palette: {
    primary: {
      main: "#fff",
    },
    type: "dark",
  },
});
```

```
const classes = useStyles();
```

```

        if (!coin) return <LinearProgress style={{
backgroundColor: "#01bf71" }} />;

return (
  <>
    <NavbarCoin toggle={toggle} />

    <div className={darkTheme}
style={{backgroundColor:"black",
color:"white",float:"left",clear:"left" ,marginTop:"6%"}}>
      <div className={classes.container}>
        <div className={classes.sidebar}>
          <img
            // eslint-disable-next-line
            src={coin?.image.large}
            alt="coin"
            height="200"
            style={{ marginBottom: 20 }}
          />

          <Typography variant="h3"
className={classes.heading}>
            {coin?.name}
          </Typography>

          <Typography variant="subtitle1"
className={classes.description}>
            {ReactHtmlParser(coin?.description.en.split(".
")[0])}
          </Typography>
          <div className={classes.marketData}>

```

```

        <span style={{ display: "flex" }}>
            <Typography variant="h5"
className={classes.heading}>
                Rank:
            </Typography>
            &nbsp; &nbsp;
            <Typography
                variant="h5"
                style={{
                    fontFamily: "Montserrat",
                }}
            >

{numberWithCommas(coin?.market_cap_rank)}
        </Typography>
    </span>

    <span style={{ display: "flex" }}>
        <Typography variant="h5"
className={classes.heading}>
            Current Price:
        </Typography>
        &nbsp; &nbsp;
        <Typography
            variant="h5"
            style={{
                fontFamily: "Montserrat",
            }}
        >

```

```

        {symbol}{" "}
        {numberWithCommas(

coin?.market_data.current_price[currency.toLowerCase
e()]}

    })
  </Typography>
</span>
<span style={{ display: "flex" }}>
                                <Typography    variant="h5"
className={classes.heading}>
      Market Cap:
    </Typography>
    &nbsp; &nbsp; &nbsp;
    <Typography
      variant="h5"
      style={{
        fontFamily: "Montserrat",
      }}
    >
      {symbol}{" "}
      {numberWithCommas(

coin?.market_data.market_cap[currency.toLowerCase
()]}

      .toString()
      .slice(0, -6)
    })
    M

```

```

        </Typography>
      </span>
    </div>
  </div>
  <CoinInfo coin={coin} />
</div>
</div>

  <Footer />
</>
);
};

export default CoinPage;)

```

Testing:

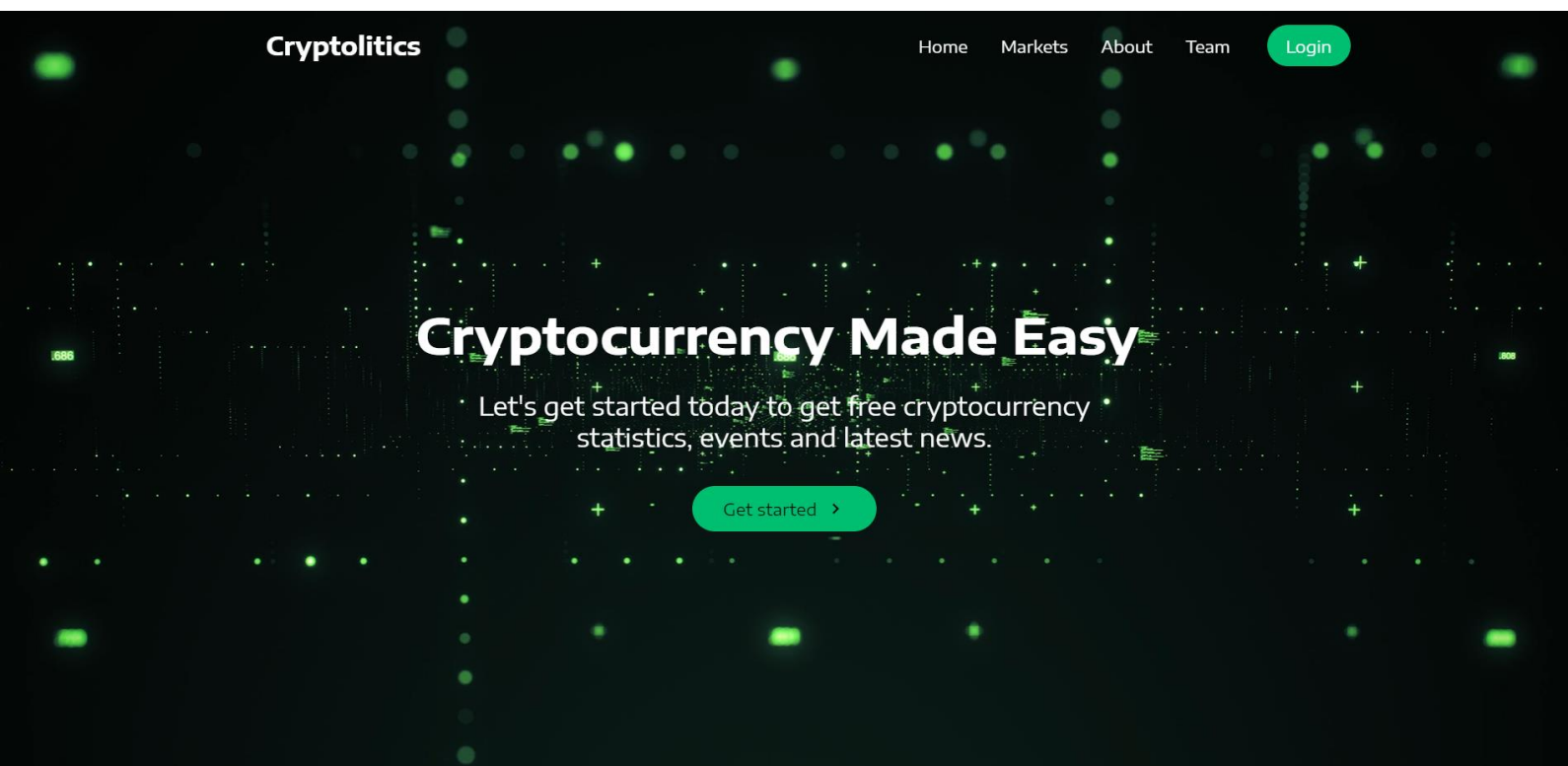
- > Manual testing was performed in order to find and fix the bugs in development process.

Sr.No	Test Scenario	Expected Results	Actual Results	Status
1.	Search crypto coins	Display coin name with option to view	Displayed coin name with option to view detailed	Success

		detailed data	data on click	
2.	Search unavailable crypto coin	Shouldn't display any coin	No coin display if coin don't present	Success
3.	View detailed statistics of coin	Should display detailed data of coin like price, market cap, past prices, etc	Displayed detailed data of coin like price, market cap, past prices, etc on click	Success
4.	Events	Should view upcoming events of all coins in event page	Displays upcoming events in event page	Success
5.	Graph of different time line	Should display graph of price of last 24hr, 1	Price of last 24hr, 1 week, 1month,	Success

		week, 1month, 1year.	1year is displayed	
6.	Price update	Price should be updated according to live price.	Price is continuously updated on refreshing page.	Success

Screen-shots of the System:



Trending Coins



ALGO -9.64:
₹ 23.74



BTC -6.38:
₹ 1,347,821.00



ETH -7.51:
₹ 100,308.00



XRP -5.42:
₹ 30.17

Top Cryptocurrency Prices by Market Cap

Currency :

INR ▾



BTC
Bitcoin

₹1,347,821.00

-6.38%

₹25,818,433M



ETH
Ethereum

₹100,308.00

-7.51%

₹12,078,794M



USDT
Tether

₹80.46

-0.70%

₹5,493,131M



BNB
BNB

₹22,814.00

-9.08%

₹3,726,121M



USDC
USD Coin

₹80.54

-0.50%

₹3,529,796M



BUSD
Binance USD

₹80.76

-0.69%

₹1,851,755M



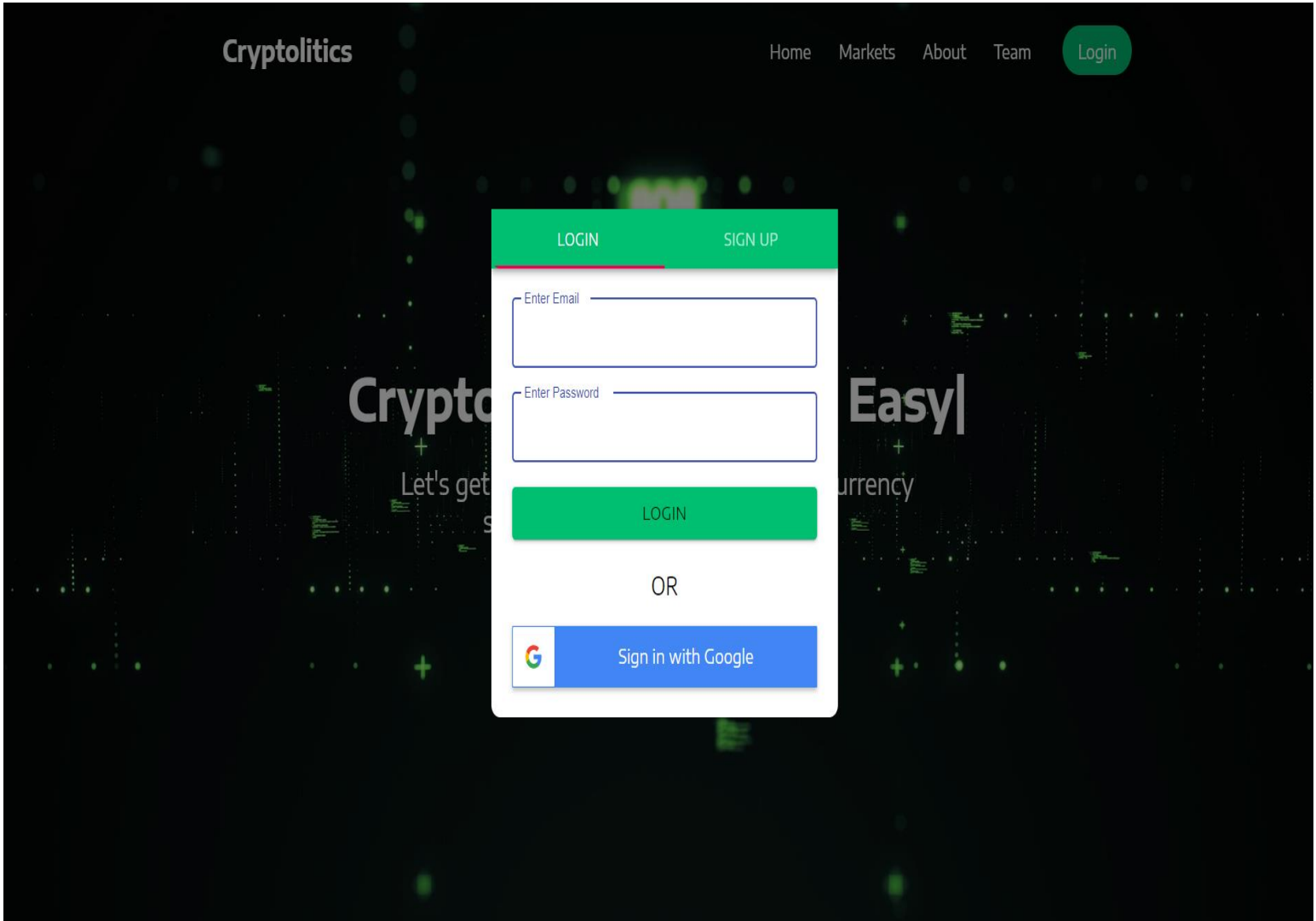
XRP
XRP

₹30.17

-5.42%

₹1,509,860M

> LOGIN PAGE:



> SIGN UP PAGE

Cryptolitics

HomeMarketsAboutTeamLogin

Trending Coins

XRP

-5.11%

₹ 30.13

DOGE

-10.42%

₹ 6.67

Top Cryptocurrencies

Market Cap

LOGIN

SIGN UP

Enter Email

Enter Password

Confirm Password

SIGN UP

OR

Sign in with Google

Currency :

INR

> GRAPHS OF COINS:

Cryptolitics

Login

INR



Bitcoin

Bitcoin is the first successful internet money based on peer-to-peer technology; whereby no central bank or authority is involved in the transaction and production of the Bitcoin currency

Rank: 1

Current Price: ₹1,346,328

Market Cap: ₹25,887,844M

WATCHLIST THIS COIN



24 Hours

30 Days

3 Months

1 Year

Cryptolitics

Login

INR



Cardano

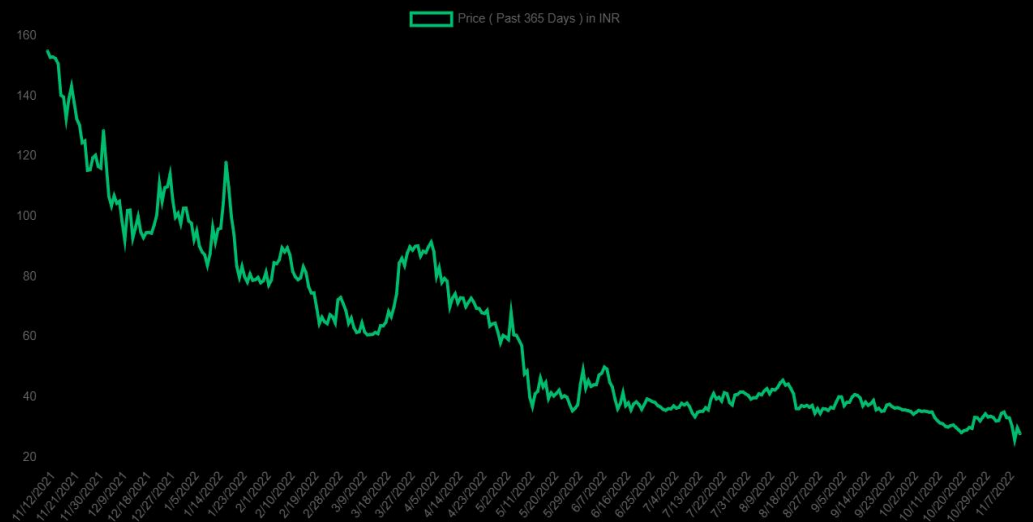
Cardano is a decentralised platform that will allow complex programmable transfers of value in a secure and scalable fashion

Rank: 8

Current Price: ₹27.82

Market Cap: ₹976,185M

WATCHLIST THIS COIN



24 Hours

30 Days

3 Months

1 Year

Conclusion:

The functionalities are implemented in system after understanding all the system modules according to the requirements.

Functionalities that are successfully implemented in the system are:

- > Searching available crypto coin
 - > Graphical chart of coin price
 - > Price history of each coin
 - > Live updates of price
 - > Upcoming events of crypto coins
 - > Detailed statistics of each coin
-
- > After the implementation and coding of system, comprehensive testing was performed on the system to determine the errors and possible flaws in the system.

Limitations and Future Extensions of System:

- > In our website, lack of premium feature can be a drawback where a user can sign up with cryptolytics and unlock premium feature which unlocks additional features like future price predictions, analytical chart of each coin, etc.
- > In we are planning to add premium feature for the user who sign up and pays necessary charge to unlock premium feature.
- > We are also planning to add blog feature where experts of this market can write blogs in order to guide other investors and can interact in comment section of each blog.

Bibliography:

Websites:

- > <https://docs.reactjs.org>
- > <https://docs.javascript.com>
- > <https://www.youtube.com>