



**NITTE**  
(Deemed to be University)

**NMAM INSTITUTE  
OF TECHNOLOGY**

Nitte (DU) established under Section 3 of UGC Act 1956 | Accredited with 'A+' Grade by NAAC

---

## **MINI PROJECT REPORT**

### **Crypto Hunt-A Cryptocurrency Price Tracker App**

Course Code: 20CSE42

Course Name: Mobile App Development

Semester: VI

Section:B

#### **Submitted To:**

Ms.Ankitha A Nayak

Assistant Professor Gd-II  
Department of Computer Science  
and Engineering

#### **Submitted By:**

Rajesh C Shettigar (4NM20CS142)  
Raksha Kamath (4NM20CS143)  
Sameer Deshpande (4NM20CS150)

#### **Date Of Submission:**

8<sup>th</sup> May 2023

Signature Of Course Instructor

## ABSTRACT

The purpose of this mobile application project is to provide users with real-time information on the current prices of various cryptocurrencies and deliver curated news updates related to the crypto market. The application aims to enhance users' ability to monitor and stay informed about the dynamic world of cryptocurrencies.

The application will feature a user-friendly interface that displays the latest prices of a wide range of cryptocurrencies, including Bitcoin, Ethereum, Ripple, and more. Users will have the option to customize their watchlist by adding their favorite cryptocurrencies for quick and easy access to their price movements.

In addition to price tracking, the application will integrate a news section that aggregates and presents the latest and most relevant cryptocurrency news from trusted sources. This feature will help users stay informed about market trends, regulatory developments, and other factors influencing the crypto industry.

The mobile application project aims to cater to both novice and experienced cryptocurrency enthusiasts, providing them with a comprehensive tool to monitor prices, access news, and stay informed about the rapidly evolving world of cryptocurrencies. By combining real-time data with curated news content, the application seeks to empower users to make informed decisions in their cryptocurrency ventures.

# TABLE OF CONTENTS

Introduction .....	(4)
Problem Statement.....	(5)
Objectives.....	(5)
Hardware/Software Requirements.....	(6)
Implementation.....	(7)
Results.....	(11)
Conclusion and Future Scope.....	(14)
References.....	(15)

## INTRODUCTION

In recent years, cryptocurrencies have gained significant attention and popularity as a new form of digital asset and investment opportunity. As the crypto market continues to evolve and expand, it becomes crucial for individuals to have access to accurate and up-to-date information to navigate this dynamic landscape effectively. This mobile application project aims to address this need by providing users with a comprehensive tool to track cryptocurrency prices, personalize their watchlist, and stay informed with curated news updates.

The application recognizes the importance of real-time data in the cryptocurrency market. By offering users access to the latest prices of a wide range of cryptocurrencies, including popular ones like Bitcoin, Ethereum, and Ripple, users can monitor market fluctuations and make informed investment decisions. Whether they are casual enthusiasts or experienced traders, this application provides them with a reliable source of real-time information, enabling them to stay ahead in the fast-paced crypto market.

Additionally, the mobile application acknowledges the significance of personalized experiences. Users can customize their watchlist by adding their favorite cryptocurrencies, ensuring that they have quick and easy access to the price movements of their preferred coins. This feature not only streamlines the tracking process but also allows users to focus on the cryptocurrencies that matter most to them, saving time and effort.

Furthermore, staying informed about the latest developments and news within the cryptocurrency industry is essential. To address this, the application integrates a news section that aggregates and presents curated cryptocurrency news from trusted sources. By providing users with timely updates on market trends, regulatory changes, and industry insights, the application empowers them to make informed decisions and stay updated with the ever-changing crypto landscape.

## PROBLEM STATEMENT

The lack of accessible and reliable information about cryptocurrency prices and news poses a challenge for individuals seeking to actively engage in the crypto market. Existing platforms often lack real-time data, personalization options, and curated news updates, hindering users' ability to make informed decisions. Therefore, there is a need for a mobile application that offers a user-friendly interface, real-time cryptocurrency prices, customizable watchlists, and curated news updates to empower users with accurate information and enhance their cryptocurrency trading and investment experiences.

## OBJECTIVES

1. Develop a mobile application that provides users with real-time cryptocurrency prices from various exchanges.
2. Design an intuitive and user-friendly interface to ensure a seamless user experience and easy navigation within the application.
3. Implement a personalized watchlist feature that allows users to customize their cryptocurrency portfolio and easily track the prices of their favorite coins.
4. Integrate a curated news section that aggregates and presents timely and relevant cryptocurrency news from reputable sources.
5. Ensure that the application delivers accurate and up-to-date information to users, reflecting the constantly changing cryptocurrency market.

# HARDWARE/SOFTWARE REQUIREMENTS

## Hardware Requirements:

- Mobile Devices (iOS/Android)
- Capable Processor
- Sufficient RAM
- Ample Storage Space

## Software Requirements:

- Latest iOS/Android Operating Systems
- Flutter Framework
- Dart Programming Language
- IDE (Android Studio or Visual Studio Code)

## IMPLEMENTATION

### **Set up the Development Environment:**

Install Flutter and necessary dependencies.

Configure Firebase project and integrate Firebase SDK for authentication.

### **User Authentication:**

Implement Firebase authentication to allow users to create accounts and log in securely.

Use Firebase Authentication API to handle user registration, login, and authentication.

### **Real-time Cryptocurrency Data:**

Integrate cryptocurrency price APIs, such as CoinGecko or CoinMarketCap, to fetch real-time cryptocurrency prices.

Use Flutter's HTTP package to make API requests and retrieve data.

Update the price data periodically using Flutter's timer or scheduling mechanisms.

### **Chart Visualization:**

Integrate Syncfusion charts for Flutter into the project.

Use the charting library to create visually appealing and interactive charts to display cryptocurrency price trends.

Customize the charts with features such as zooming, panning, and tooltips to enhance user experience.

### **Watchlist and Local Storage:**

Implement local storage using Flutter's `shared_preferences` package.

Allow users to add cryptocurrencies to their watchlist by storing the selected coins' information in local storage.

Provide options to remove coins from the watchlist and manage the user's preferences.

### **News Aggregation:**

Integrate a news API or RSS feed to fetch cryptocurrency-related news articles. Parse and display curated news articles within the application using Flutter's UI components, such as ListView or Card.

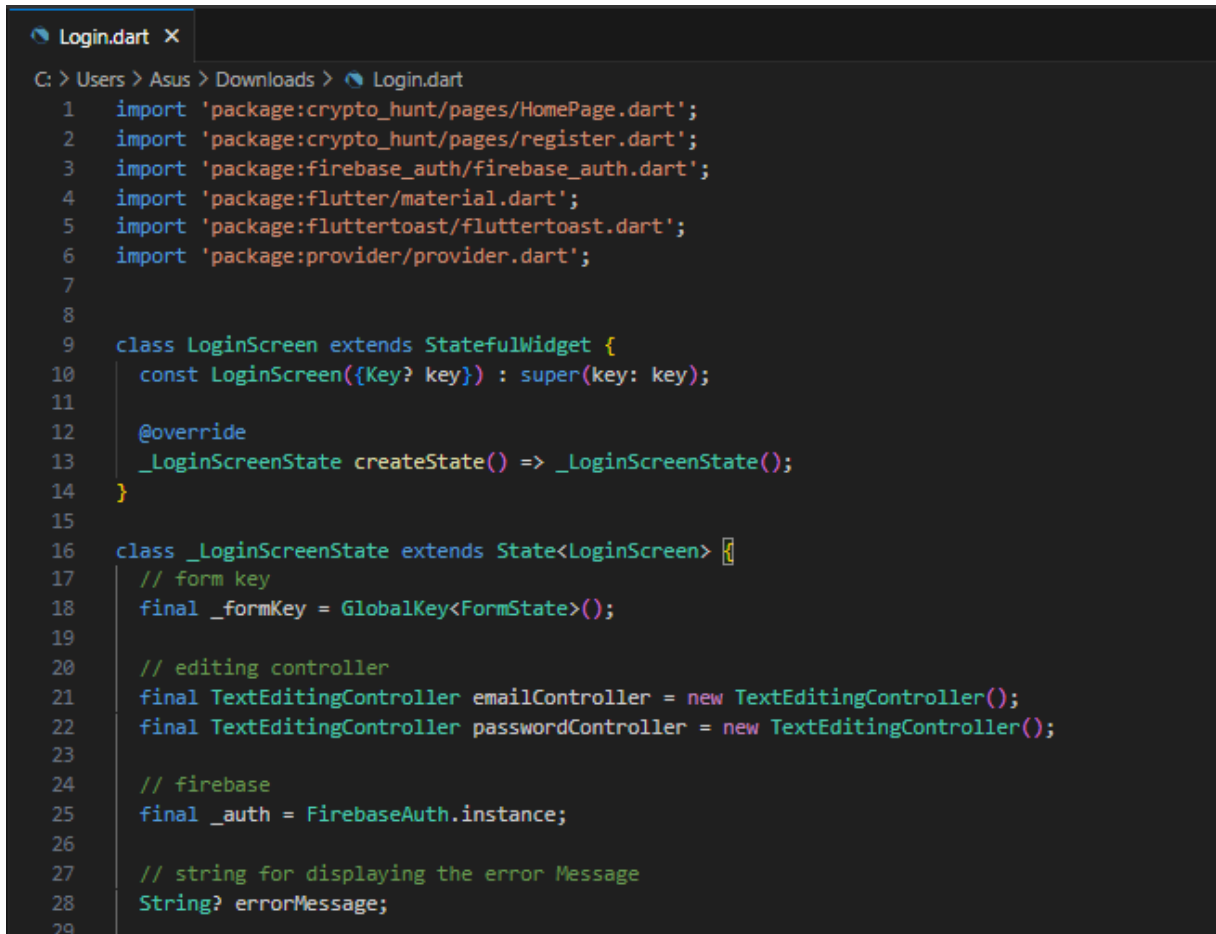
## User Interface Design:

Create screens and UI components using Flutter's widget library.

Design an intuitive user interface with smooth navigation, incorporating charts, watchlist management, and news display.

Apply appropriate theming and styling to enhance the visual appeal of the app.

## Login Page



```
1 import 'package:crypto_hunt/pages/HomePage.dart';
2 import 'package:crypto_hunt/pages/register.dart';
3 import 'package:firebase_auth/firebase_auth.dart';
4 import 'package:flutter/material.dart';
5 import 'package:fluttertoast/fluttertoast.dart';
6 import 'package:provider/provider.dart';
7
8
9 class LoginScreen extends StatefulWidget {
10   const LoginScreen({Key? key}) : super(key: key);
11
12   @override
13   _LoginScreenState createState() => _LoginScreenState();
14 }
15
16 class _LoginScreenState extends State<LoginScreen> {
17   // form key
18   final _formKey = GlobalKey<FormState>();
19
20   // editing controller
21   final TextEditingController emailController = new TextEditingController();
22   final TextEditingController passwordController = new TextEditingController();
23
24   // firebase
25   final _auth = FirebaseAuth.instance;
26
27   // string for displaying the error Message
28   String? errorMessage;
29 }
```

The above code is a part of the snippet for the login page which uses firebase authentication.



## Home Page

```
HomePage.dart X
C:\Users> Asus > Downloads > HomePage.dart
1 import 'package:crypto_hunt/pages/Favorites.dart';
2 import 'package:crypto_hunt/pages/Market.dart';
3 import 'package:crypto_hunt/pages/news.dart';
4 import 'package:flutter/material.dart';
5 import '../widgets/Navbar.dart';
6
7 class HomePage extends StatefulWidget {
8   const HomePage({Key? key}) : super(key: key);
9
10  @override
11  State<HomePage> createState() => _HomePageState();
12 }
13
14 class _HomePageState extends State<HomePage> with TickerProviderStateMixin {
15   int _currentIndex = 0;
16
17   @override
18   Widget build(BuildContext context) {
19     return Scaffold(
20       drawer: Navbar(),
21       body: SafeArea(
22         child: Container(
23           // padding: const EdgeInsets.only(top: 3, left: 3, right: 3, bottom: 3),
24           child: IndexedStack(
25             index: _currentIndex,
26             children: const [
27               Markets(),
28               Favorites(),
29               CryptoNewsList(),
30             ],
31           ),
32         ),
33       ),
34       bottomNavigationBar: BottomNavigationBar(
```

The above code is a part of the snippet for home page where the user can see prices of various cryptocurrencies.

## News Page

```
news.dart X
C:\Users> Asus > Downloads > news.dart
1 import 'package:flutter/material.dart';
2 import 'package:http/http.dart' as http;
3 import 'dart:async';
4 import 'dart:convert';
5 import 'package:readmore/readmore.dart';
6
7 import '../widgets/Navbar.dart';
8
9 class CryptoNewsList extends StatefulWidget {
10   const CryptoNewsList({Key? key}) : super(key: key);
11
12   @override
13   _CryptoNewsListState createState() => _CryptoNewsListState();
14 }
15
16 class _CryptoNewsListState extends State<CryptoNewsList> {
17   List<dynamic> newsItems = [];
18   @override
19   void initState() {
20     super.initState();
21     getNews();
22   }
23
24   Future<void> getNews() async {
25     var response = await http.get(Uri.parse('https://n59der.deta.dev/'));
26     String responseBody = response.body;
27     Map<String, dynamic> items = jsonDecode(responseBody);
28     newsItems = items['newsItems'];
29   }
```

The above code is a part of the snippet for news page where the user can see news related to cryptocurrencies. News is fetched from n59 API.

## FAVORITES

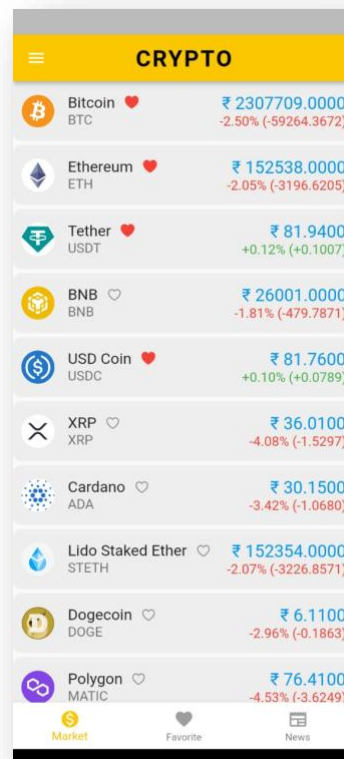
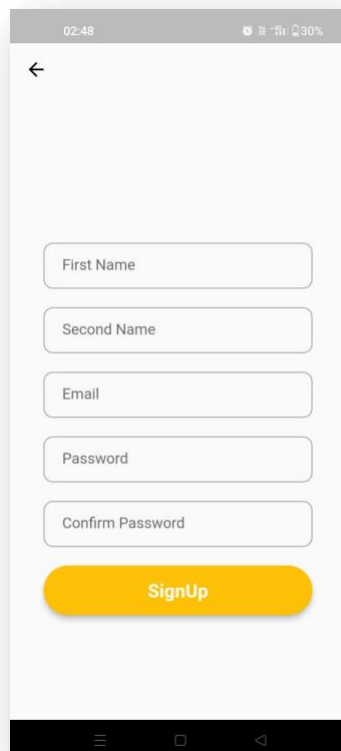
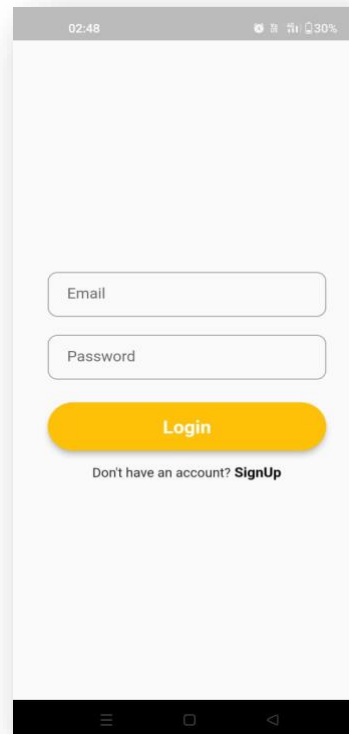
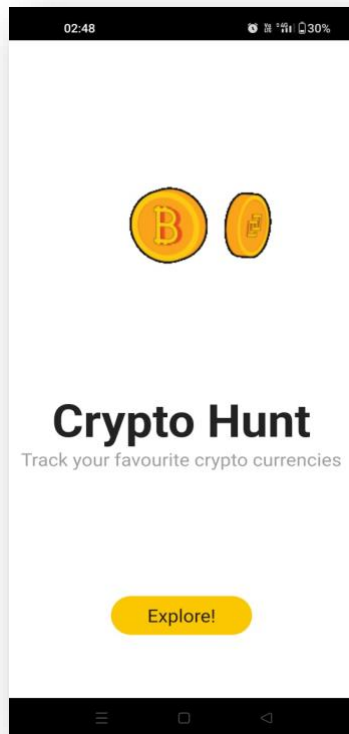
```

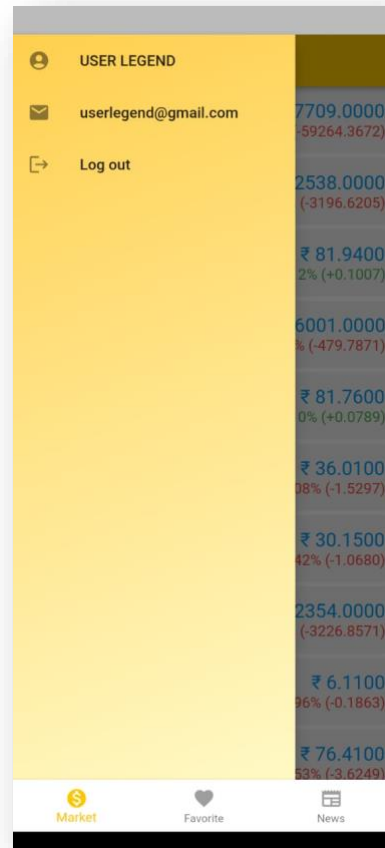
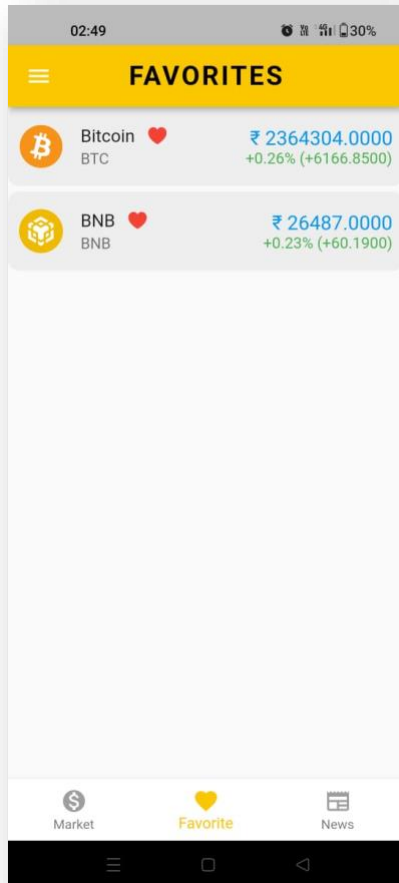
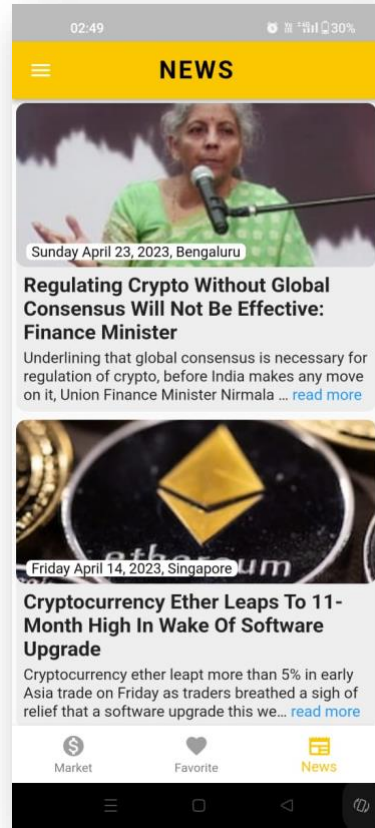
1 | import 'package:crypto_hunt/models/Cryptocurrency.dart';
2 | import 'package:crypto_hunt/providers/market_provider.dart';
3 | import 'package:flutter/material.dart';
4 | import 'package:provider/provider.dart';
5 | import '../widgets/CryptoListTile.dart';
6 | import '../widgets/Navbar.dart';
7 |
8 | class Favorites extends StatefulWidget {
9 |   const Favorites({Key? key}) : super(key: key);
10 |
11 |   @override
12 |   State<Favorites> createState() => _FavoritesState();
13 | }
14 |
15 | class _FavoritesState extends State<Favorites> {
16 |   @override
17 |   Widget build(BuildContext context) {
18 |     return Scaffold(
19 |       drawer: Navbar(),
20 |       appBar: AppBar(
21 |         title: Text(
22 |           'FAVORITES',
23 |           style: TextStyle(
24 |             color: Colors.black,
25 |             fontWeight: FontWeight.bold,
26 |             fontSize: 24.0,
27 |             letterSpacing: 2,
28 |           ),
29 |       ),
30 |       backgroundColor: Color(0xffFBC700),
31 |       centerTitle: true,
32 |     ),

```

The above code is a part of the snippet which displays the cryptocurrencies set as favorite by the user.

# RESULTS AND DISCUSSION





The implementation of the cryptocurrency mobile app, integrating Syncfusion charts, Firebase authentication, and local storage for the wishlist feature, has yielded positive results. The app provides users with real-time cryptocurrency prices, personalized watchlists, and curated news updates, enhancing their cryptocurrency trading and investment experiences.

The integration of Syncfusion charts has allowed for the visual representation of cryptocurrency price trends, enabling users to analyze and track price movements easily. The charts provide interactive features such as zooming and panning, empowering users to explore price data in more detail. This feature enhances the app's usability and helps users make informed decisions based on accurate and visually appealing information.

The implementation of Firebase authentication ensures secure user registration and login processes. Users can create accounts and log in securely using Firebase's authentication API. This feature helps maintain the privacy and security of user data, building trust and confidence among app users.

The integration of local storage for the wishlist feature has proven to be effective in allowing users to customize their cryptocurrency portfolio. Users can add and remove cryptocurrencies from their watchlist, and the selected coins' information is stored locally. This local storage functionality ensures a personalized experience for users, allowing them to easily track their favorite cryptocurrencies.

The news aggregation feature, integrating a news API or RSS feed, has provided users with curated cryptocurrency news articles within the app. Users can stay informed about the latest developments in the crypto market, making the app a one-stop solution for both price tracking and news updates. This feature enhances the app's value proposition and provides users with comprehensive information in a convenient manner.

Overall, the implemented cryptocurrency mobile app has successfully achieved its objectives by providing users with real-time cryptocurrency prices, personalized watchlists, and curated news updates. The integration of Syncfusion charts, Firebase authentication, and local storage has played a crucial role in delivering a feature-rich and user-friendly application for cryptocurrency enthusiasts and investors.

## CONCLUSION AND FUTURE SCOPE

In conclusion, the development of a mobile application that provides real-time cryptocurrency prices, personalized watchlists, and curated news updates is crucial to meet the growing demands of cryptocurrency enthusiasts and investors. By incorporating features such as real-time data integration, personalized watchlists, and curated news aggregation, the application aims to empower users with accurate information and enhance their cryptocurrency trading and investment experiences.

The application's user-friendly interface, intuitive design, and seamless navigation ensure a positive user experience, enabling users to easily access the information they need and make informed decisions in the fast-paced crypto market. The implementation of security measures and data storage solutions helps protect user information and maintain their privacy throughout their interactions with the application.

While the initial development of the mobile application focuses on delivering essential features, there is ample room for future enhancements and expansions. Some potential areas for future scope include:

1. **Advanced Charting and Analysis:** Integrate advanced charting tools and technical analysis features to provide users with in-depth insights into cryptocurrency price movements and trends.
2. **Portfolio Tracking and Performance Analytics:** Enable users to track and analyze the performance of their cryptocurrency portfolios, including profit/loss calculations, portfolio diversification insights, and investment analytics.
3. **Multi-language Support:** Expand the application's language support to cater to a wider user base and provide a localized experience for users from different regions.
4. **Enhanced News Filtering and Customization:** Allow users to customize their news preferences further, such as filtering news by specific cryptocurrencies or topics of interest.

## REFERENCES

<https://www.syncfusion.com/flutter-widgets/flutter-charts>

<https://firebase.flutter.dev/docs/auth/overview>

[https://pub.dev/packages/shared\\_preferences](https://pub.dev/packages/shared_preferences)

<https://coingecko.com/api/documentation>

<https://flutter.dev/>