Share Market Learning App

Mr. Pagire R. R.[1], Miss. Dumbre Siddhi[2], Miss. Pote Vaishnavi[3],
Miss. Gunjal Shubhangi[4], Miss. Ponde Rutuja[5]

Professor, Department of Computer Engineering[1]
Students, Department of Computer Engineering[2,3,4,5]
Samarth Polytechnic, Belhe, India

Abstract: *Forecasting share performance becomes more challenging issue due to the enormous amount of valuable trading data stored in the stock database. Currently, existing forecasting methods are insufficient to analyze the share performance accurately. There are two main reasons for that: First, the study of existing forecasting methods is still insufficient to identify the most suitable methods for share price prediction. The share market is no other. It is one of the most volatile markets and to earn high returns requires expertise training on the market. "Share market learning App" is static app build for learner's interested to learn Share market app related terms. In this app user can learn basics to intermediate terms like Stock risk, Stock Formula, Derivatives, Mutual Funds, IPO and many more. To encourage learners it also includes Quotes of Warren Buffet a famous businessman, Investor and Philosopher We have decided to build Share market learning app using one of the famous technologies i.e. Android (JAVA, XML) and Google Firebase as Database. One of the biggest reason to develop app in Android is it is the most used Operating System in world so large population can take benefit of App.*

Keywords: Share Market, Android App, Google Firebase, Zerodha Platform

I. INTRODUCTION

The stock market can be a daunting place, particularly for beginners who have no prior experience or knowledge about investing. With so many concepts, terminologies, and technicalities to understand, it can be challenging to make informed investment decisions. However, the stock market also presents an opportunity for individuals to grow their wealth and secure their financial future. The Share Market Learning app aims to bridge the gap between the complexity of the stock market and the lack of knowledge among individuals interested in investing. The app provides a comprehensive learning experience that covers a range of topics related to the stock market, including basic terminology, analysis, stock risk, derivatives, mutual funds, multi-bagger, IPO, stock formulas, forex trading, stock broker, primary market, commodity, and stock markets worldwide. In addition to providing a wealth of information, the Share Market Learning app offers users access to popular trading platforms such as zerodha and upstox. Users can practice trading with virtual funds and use trading tools and resources such as charts, historical data, and live updates to make informed decisions about their investments. Moreover, the Share Market Learning app offers a vast collection of Warren Buffet quotes, allowing users to learn from the principles and strategies of one of the most successful investors of all time. The app offers a unique insight into the mindset and strategies of Warren Buffet, enabling users to apply his principles to their trading strategies and make informed investment decisions. Overall, the Share Market Learning app is an innovative tool that offers a comprehensive learning experience for individuals interested in the stock market. It provides users with the necessary knowledge, tools, and resources to make informed investment decisions and practice trading with virtual funds. The app is easy to use and accessible, catering to both beginners and experienced investors.

II. LITERATURE SURVEY

Survey of stock market prediction using machine learning approach Authors: Ashish Sharma ; Dinesh Bhuriya ; Upendra Singh 2017 International conference of Electronics, Communication and Aerospace Technology (ICECA) Stock market is basically nonlinear in nature and the research on stock market is one of the most important issues in recent years. People invest in stock market based on some prediction. For predict, the stock market prices people search such methods and tools which will increase their profits, while minimize their risks. Prediction plays a very important

role in stock market business which is very complicated and challenging process. Employing traditional methods like fundamental and technical analysis may not ensure the reliability of the prediction. To make predictions regression analysis is used mostly. In this paper we survey of well-known efficient regression approach to predict the stock market price from stock market data based. In future the results of multiple regression approach could be improved using more number of variables.

Short-term prediction for opening price of stock market based on self-adapting variant PSO-Elman neural network Authors: Ze Zhang ; YongjunShen ; Guidong Zhang ; Yongqiang Song ; Yan Zhu, 2017 8th IEEE International Conference on Software Engineering and Service Science (ICSESS) Stock price is one of intricate non-linear dynamic system. Typically, Elman neural network is a local recurrent neural network, having one context layer that memorizes the past states, which is quite fit for resolving time series issues. Given this, this paper takes Elman network to predict the opening price of stock market. Considering that Elman network is limited, this paper adopts selfadapting variant PSO algorithm to optimize the weights and thresholds of network. Afterwards, the optimized data, regarded as initial weight and threshold value, is given to Elman network for training, accordingly the prediction model for opening price of stock market based on self-adapting variant PSO-Elman network is formed. Finally, this paper verifies that model by some stock prices, and compares with BP network and Elman network, so as to draw the result that shows the precision and stability of this predication model both are superior to the traditional neural network.

Combining of random forest estimates using LSboost for stock market index prediction Authors: Nonita Sharma ; Akanksha Juneja,2017 2nd International Conference for Convergence in Technology (I2CT) This research work emphases on the prediction of future stock market index values based on historical data. The experimental evaluation is based on historical data of 10 years of two indices, namely, CNX Nifty and S&P Bombay Stock Exchange (BSE) Sensex from Indian stock markets. The predictions are made for 1-10, 15, 30, and 40 days in advance. This work proposes to combine the predictions/estimates of the ensemble of trees in a Random Forest using LSboost (i.e. LS-RF). The prediction performance of the proposed model is compared with that of well-known Support Vector Regression. Technical indicators are selected as inputs to each of the prediction models. The closing value of the stock price is the predicted variable. Results show that the proposed scheme outperforms Support Vector Regression and can be applied successfully for building predictive models for stock prices prediction.

Using social media mining technology to assist in price prediction of stock market Authors: Yaojun Wang ; Yaoqing Wang,2016 IEEE International Conference on Big Data Analysis (ICBDA) Price prediction in stock market is considered to be one of the most difficult tasks, because of the price dynamic. Previous study found that stock price volatility in a short term is closely related to the market sentiment; especially for small-cap stocks. This paper used the social media mining technology toquantitative evaluation market segment, and in combination with other factors to predict the stock price trend in short term. Experiment results show that by using social media mining combined with other information, the stock prices prediction model can forecast more accurate.

Stock market prediction using an improved training algorithm of neural network Authors: MustainBillah ; SajjadWaheed ; Abu Hanifa,2016 2nd International Conference on Electrical, Computer & Telecommunication Engineering (ICECTE) Predicting closing stock price accurately is an challenging task. Computer aided systems have been proved to be helpful tool for stock prediction such as Artificial Neural Net-work(ANN), Adaptive Neuro Fuzzy Inference System (ANFIS) etc. Latest research works prove that Adaptive Neuro Fuzzy Inference System shows better results than Neural Network for stock prediction. In this paper, an improved LevenbergMarquardt(LM) training algorithm of artificial neural network has been proposed.

Literature review on Artificial Neural Networks Techniques Application for Stock Market Prediction and as Decision Support Tools Authors: MuhammadFirdaus ; SwelandiahEndahPratiwi ; DionysiaKowanda ; Anacostia Kowanda This literature review is aiming to explore the use Artificial Neural Network (ANN) techniques in the field of stock market prediction. Design: Content analysis research technique. Data sources: Information retrieved from ProQuest electronic databases. Review methods: Utilizing key terms and phrases associated with Artificial Neural Network Stock Market Prediction from 2013-2018. Out of the 129 scholarly journal reviewed, there are 4 stock market studies met the inclusion criteria.

implemented the system "Real Time Bus Tracking System".

III. METHODOLOGY

Proposed Methodology

For capstone project, we have divided project into four phases named as Planning, Coding, Testing and Reviewing phase respectively. Planning phase must contain creating all analysis of reference links and try to take "design and execution inspiration" from various other source and perform detail planning about coding and testing phase. Coding phase must contain designing and developing the UI. Designing UI must be done by drawing sketch on book and developing UI must be done via XML using Android Studio. Also we need backend as JAVA and Firebase. After that we must create test cases and execute them. And thorough documentation must be done of all.

Actual Methodology

As proposed above, the first phase required to start the project is planning and required action plan was created. Then we designed the diagrams necessary for clear view of the projects goal like DFD0, DFD1 (Data Flow Diagram), E-R Diagram (Entity- Relationship), use case diagram, Class Diagram, component Diagram and modulate them. We received reviews and refinement for the diagrams and designs via our mentor and performed required actions. We started the coding phase by designing of user-interface using XML as front-end language according to the plan prepared after revision of capstone-project planning report. After finalization of UI, started coding and implementation of project using JAVA as back-end languages. We took reviews from our guide and performed unit-testing about the UI and features and performed the same simultaneously. At last integration testing part is started. For documenting the project, we created and reviewed the Report based on the project and submitted the same.

Class Diagram

In software engineering, a class diagram in the Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations and the relationships among the classes. It explains which class contains information
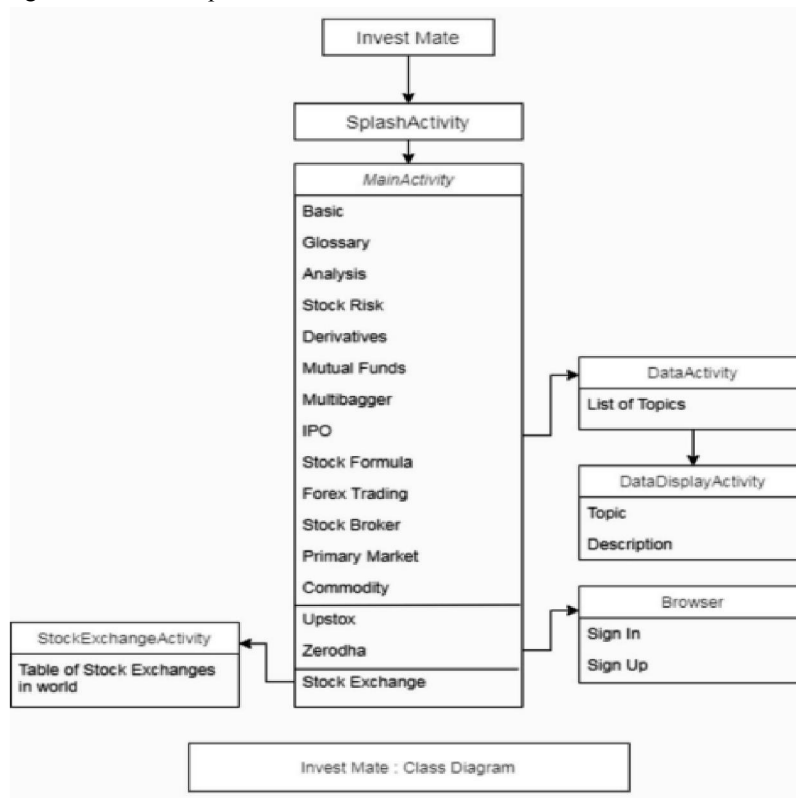

Fig. 1.Class Diagram

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Data Flow Diagram

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It can be manual, automated, or a combination of both. It shows how data enters and leaves the system, what changes the information, and where data is stored. The objective of a DFD is to show the scope and boundaries of a system as a whole. It may be used as a communication tool between a system analyst and any person who plays a part in the order that acts as a starting point for redesigning a system. The DFD is also called as a data flow graph or bubble chart
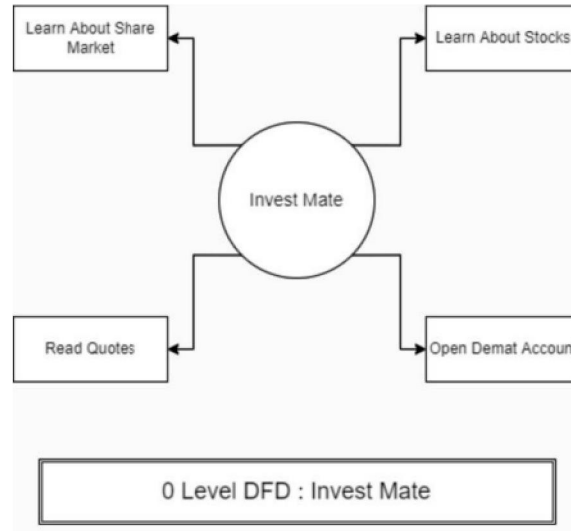
Fig. 2.Data Flow Diagram

Component Diagram

In Unified Modelling Language (UML), a component diagram depicts how components are wired together to form larger components or software systems. They are used to illustrate the structure of arbitrarily complex systems.
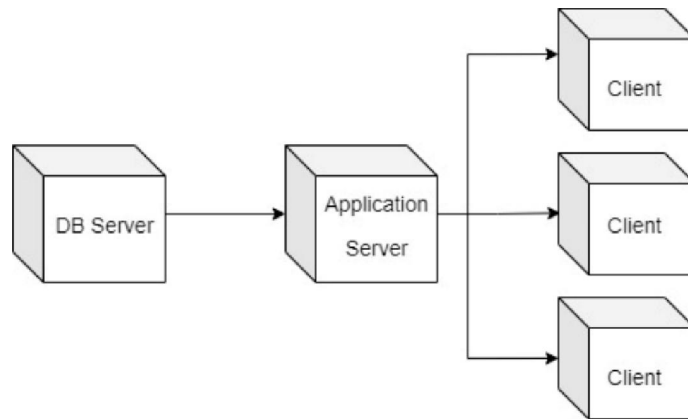

Fig. 3.Component diagram

Entity Relationship

An entity relationship model describes interrelated thing of specific domain knowledge. A basic ER model is composed of entity types and specifies relationships that can exist between
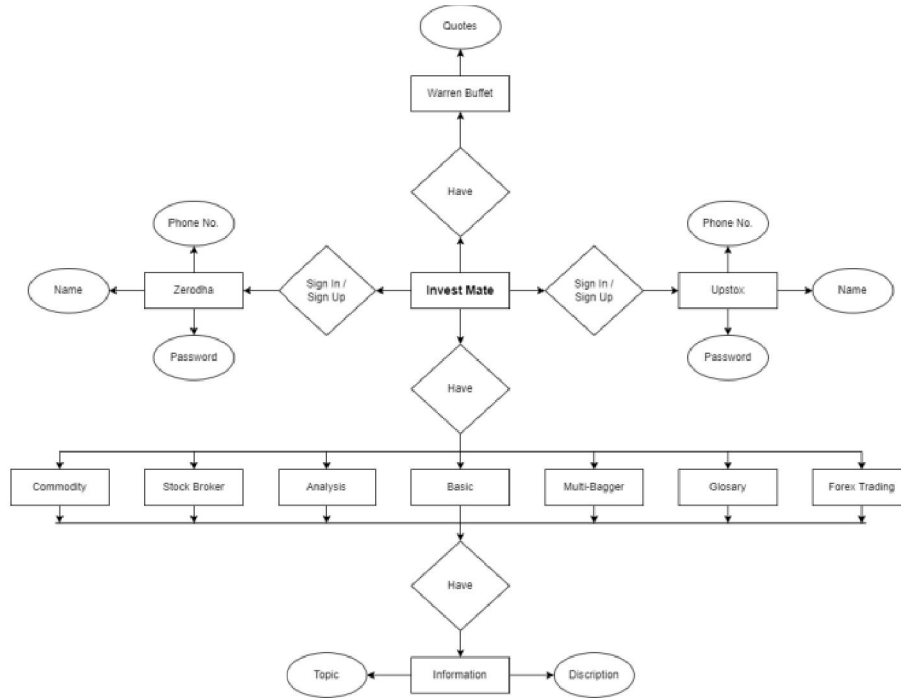
Fig. 4.Entity Relationship

Sequence Diagram

A sequence diagram or system sequence diagram (SSD) shows process interactions arranged in time sequence in the field of software engineering. It depicts the processes involved and the sequence of messages exchanged between the processes needed to carry out the functionality. Sequence diagrams are typically associated with use case realizations in the 4+1 architectural view model of the system under development. Sequence diagrams are sometimes called event diagrams or event scenarios.
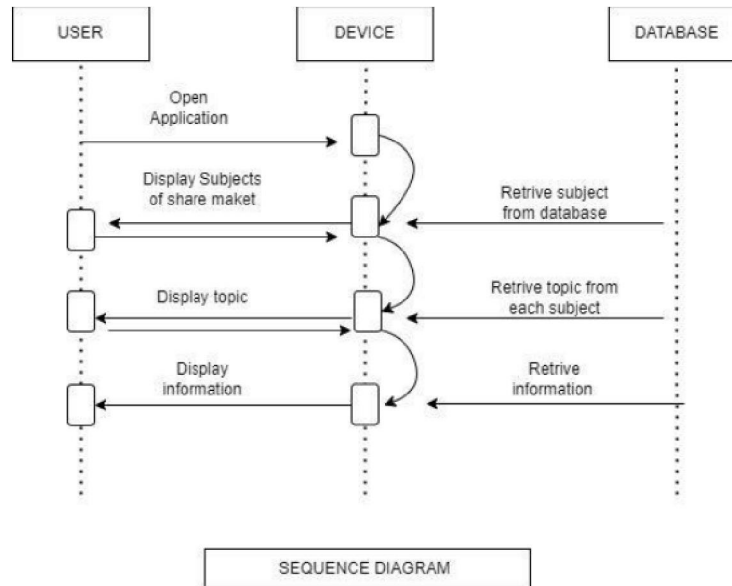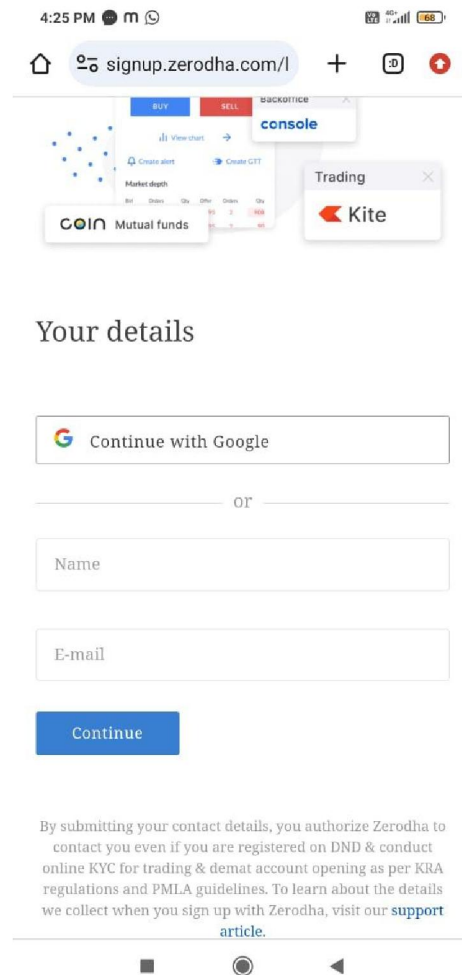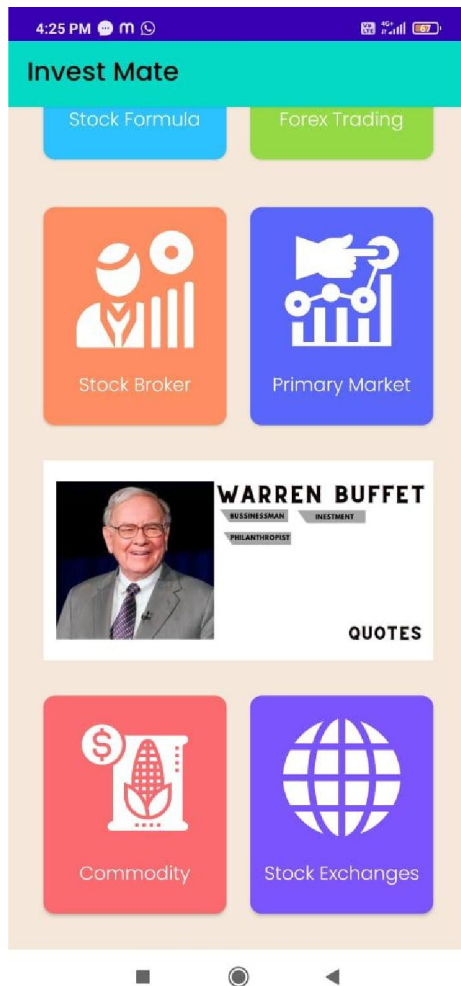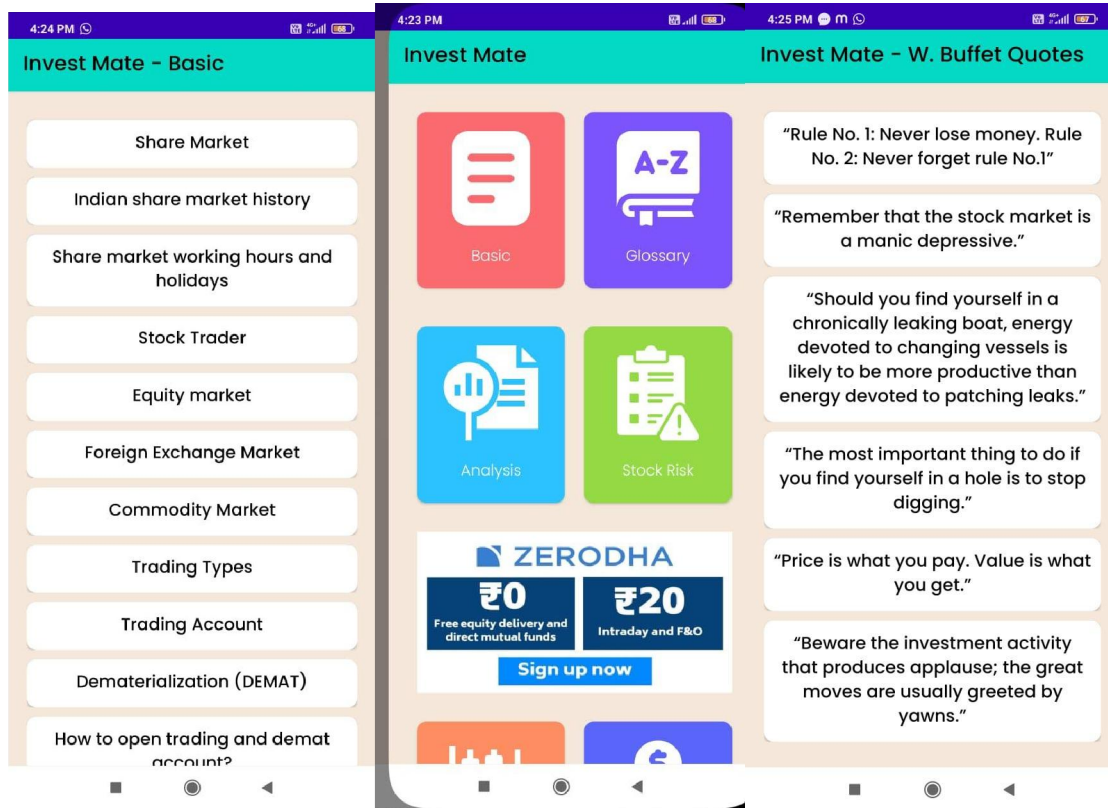

Fig. 5.Sequence Diagram

IV. RESULT & APPLICATION

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In above images we have shown some screenshots of our app.

Application:

1. Easy Learning: The app aims to make learning about the stock market easy and accessible for everyone. The app provides an easy-to-use interface that allows users to quickly navigate through the different features.

2. Comprehensive content: The app offers comprehensive content on different concepts of the stock market, including basic terms, analysis, and risk management. This information can be beneficial to both novice and experienced investors.

3. Zerodha and Upstox Integration: The app allows users to register for popular stockbrokers Zerodha and Upstox directly from the app. This integration can help users start trading in the stock market with ease.

4. Warren Buffett's Quotes: The app also provides quotes from Warren Buffett, one of the world's most successful investors. These quotes can provide insights into the mindset and approach of successful investors and can motivate users to learn more about the stock market

V. CONCLUSION

The Share Market Learning app is a useful tool for anyone looking to learn more about the stock market. With its comprehensive content and easy-to-use interface, the app can make learn about the stock market to everyone. The integration with popular stockbrokers Zerodha and Upstox and the inclusion of Warren Buffett's quotes make the app an excellent choice for those looking to start investing in the stock market.

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