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Mukesh Patel School of Technology Management and Engineering
B.Tech Integrated Program

A Report on

INPLANT TRAINING

AT

Company Logo



Angel Broking Limited

MIDC, G1, Akruti Trade Centre, Andheri East, MUMBAI – 400093

Submitted By

Dhrumil Shreyans Shah

SAP ID: 70321016073

Under The Guidance Of

Prof T Vijayetha



Shri Vile Parle Kelvani Mandal's

Mukesh Patel School of Technology & Management Engineering

Department of Computer Engineering

Vile Parle (w), Mumbai- 400056

Inplant Training Period

24/06/2021 to 23/06/2022

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NO OBJECTION CERTIFICATE

This is to certify that Dhrumil Shreyans Shah (SAP ID.70321016073) student of Mukesh Patel School of Technology Management & Engineering, has successfully completed his/ her Semester **(XI/ XII)** Inplant Training from 24/06/2021 to 23/06/2022, at Angel One Limited and has completed the tasks given to him during the Inplant Training. The Report is submitted in partial fulfillment of the requirement for B.Tech Integrated Computer Engineering. He/ she have been allowed to include the relevant information from the Company for which we have no objection.

Signature & Stamp of The Industry

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CERTIFICATE OF SUBMISSION

This is to certify that the report entitled 'Inplant Training at Angel One Limited' is a bonafide work of Dhruvil Shreyans Shah (SAP ID.70321016073) and submitted in semester (**XI/XII**) for the partial fulfillment of B.Tech Integrated in Computer Engineering at , Mukesh Patel School of Technology Management & Engineering Mumbai during the academic year 2019-2020.

Signature:

Faculty Mentor

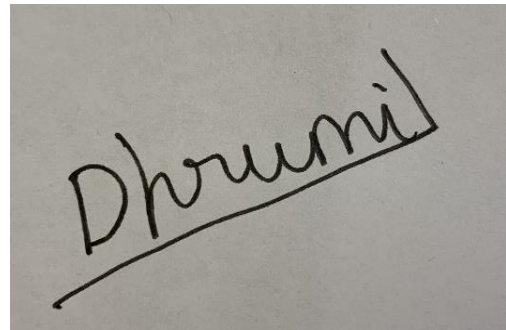
B Tech. Integrated Incharge

B Tech. Integrated Director

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DECLARATION

I, Dhrumil Shreyans Shah, SAP ID. 70321016073 a student of Semester (**XI/XII**) of B.Tech Integrated Program in Computer engineering humbly submit that I have completed from time to time the Inplant Training work as described in this report by my own skills and studied from 24/06/2021 to 23/06/2022. I have not copied the report or it's from any appreciable part from any other literature in contravention of academics ethics. I declare that this written submission represents my ideas in my own words. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be the cause of disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

A photograph of a handwritten signature 'Dhrumil' in black ink on a light-colored surface. The signature is written in a cursive style and is underlined with a single horizontal stroke.

Date: 18/04/2022

Place: Mumbai

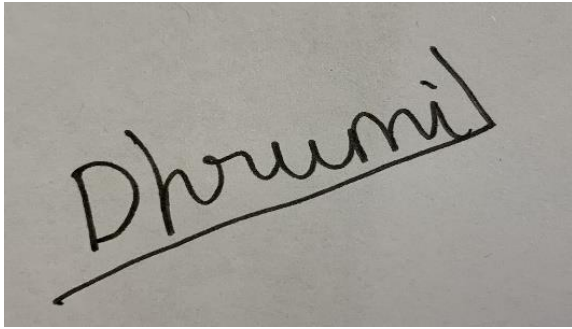
Name & Signature of the Student

Name- Dhrumil Shreyans Shah

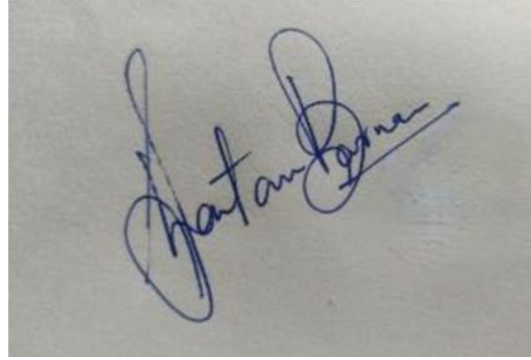
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CERTIFICATE OF INPLANT TRAINING

This is to certify that Mr Dhruvil Shreyans Shah SAP ID.70321016073 of **XI/XII Semester** of B.Tech Integrated Program Computer /EXTC/Civil/Mechanical has attended the Inplant Training for 95 days out of 95 days at Angel One Limited (Angel Broking Private Limited) during the Period: from 24/06/2021 to 23/06/2022.

A photograph of a handwritten signature in blue ink on a light-colored surface. The signature is 'Dhruvil' written in a cursive style, underlined with a single horizontal stroke.

Signature of the Student

A photograph of a handwritten signature in blue ink on a light-colored surface. The signature is 'Hatan' followed by a stylized flourish, underlined with a single horizontal stroke.

Signature of the Industry Mentor

Forwarded with compliments to the HoD for necessary action.

The details of working at organization:

Present: 329 Days

Leave: 1 Days

Absent: 0 Days

Total: 330 Days

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Table of Contents	Page No.
Chapter-1 <ul style="list-style-type: none">● Introduction about the Company (Background of the Industry), Products, Services & Solution etc● About the Department	1-2
Chapter-2 <ul style="list-style-type: none">● Brief about the Technology/Equipment/ Hardware etc.● Brief about the Programming languages/ Tools/ Softwares etc	3-4
Chapter-3 <ul style="list-style-type: none">● Brief about the Projects undertaken	5-6
Chapter-4 <ul style="list-style-type: none">● Learning In the Inplant Training	7
Chapter-5 <ul style="list-style-type: none">● Conclusion & Future Plan of Action	8

Chapter-1

I. Introduction about the Company (Background of the Industry), Products, Services & Solution etc

Angel Broking Limited, trading under the brand name **Angel One**, is an Indian stockbroker firm established in 1996. The company is a member of the Bombay Stock Exchange, National Stock Exchange of India, National Commodity & Derivatives Exchange Limited and Multi Commodity Exchange of India Limited. It is a depository participant with Central Depository Services Limited (CDSL). The company has more than 8500 sub-brokers and franchisee outlets in more than 900 cities across India.

The company's services include online stock broking, depository services, commodity-trading and investment-advisory services. Personal loans and insurance are also delivered by this company. In 2006, Angel Broking also started its portfolio management services, IPOs business and mutual funds distribution arm.

Angel Broking was incorporated on 8 August 1996 as a private limited company. Later, Angel Broking was incorporated as a wealth management, retail and corporate broking firm in December, 1997. In November 1998, Angel Capital and Debt Market Ltd. gained membership of National Stock Exchange as a legal entity. The company opened its commodity broking Division in April, 2004. In November 2007, Birla Sun Life Insurance joined hands with Angel Broking for distribution of its insurance products. The International Finance Corporation bought an 18% stake in Angel Broking for ₹152 crore (equivalent to ₹369 crore or US\$52 million in 2019) in December 2007. The company opened an office in Karol Bagh, New Delhi in October 2012.

In January 2013, a probe found the company and two other entities involved in fraudulent and unfair trade practices in transactions of shares of Sun Infoways during Feb-May 2001. As a result, SEBI restrained from taking new clients for a period of two weeks. Angel filed an appeal against the SEBI order which was dismissed by the Securities appellate tribunal. Angel Broking began offered shares through an initial public offering in September 2020, and was listed on the Bombay Stock Exchange and the National Stock Exchange on 5 October 2020.

II. Background of the Industry

The Background page of Angel Broking Ltd. captures the details on Company's Industry, Incorporation Date, Face Value, Registered Address, Web Site, Registrar, and Auditors information.

Industry name	Finance and Investments
House name	Not Applicable
Collaborative Country Name and Joint Sector Name	NA
Year Of Incorporation	1996
Face Value	10.0

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III. Products and Services

Angel Broking has products such as Angel Spark, Angel BEE mutual fund app, Angel Speed-Pro, Angel Trade and Angel Swift for online trading. Angel Eye is a browser trading application; Speed-Pro is a trading platform application. Angel Trade offers an online trading platform for share investors; and Swift is a trading app for small devices

Products

1. Equity Trading

After opening demat account Angel Broking customers can trade in equity market. Equity trading is the buying/selling of company shares at a market value. Equity trading is the buying and selling of company shares or stocks, also known as equities, on the financial market. There are a few ways in which you can invest in equities. Most equity trading refers to the buying and selling of public company shares through a stock exchange or as over-the-counter products.

2. Commodity

It is giving its customers opportunity to trade in commodity. A commodity trading are physicals goods that they can trade such as precious metals, energy, agriculture and base metals. Commodity trading is the buying, selling and trading of commodities. Commodity trading in India is usually done through derivative contracts such as commodity futures and options. A commodity derivative contract like futures and options derives its value from the underlying asset i.e. commodity.

3. Currency trading

It allows investors and traders can buy/sell international currencies. Currency trading, often referred to as foreign exchange or Forex, is the purchasing and selling of currencies in the foreign exchange marketplace, done with the objective of making profits.

4. Futures and Options

It lets you to trade in futures and options respectively. In future traders can buy/sell the underlying securities at predefined or future date. Whereas options give the rights to buy/sell underlying securities at specified date without any obligation.

5. Mutual Funds and SIP

It enables investors to pool their money into the one professionally managed investment that are mutual funds. If you want to invest money in an ideal way you can go for SIP that allows investors to invest in regular intervals.

6. Insurance

Avail the benefits of this product and get the claim against specified loss, damage, illness or death from the company.

Services

1. Demat Services

Through demat services Angel Broking is offering securities in electronic form. Demat services are one of the secure and convenient way to keep track of shares, time saving and since it holds the securities electronically there will be a no storage risk.

2. Trading Services

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Like bank accounts, trading accounts acts as a platform that use to buying/selling securities. With the help of Angel Broking online trading platforms traders and investors can buy/sell stocks at one click.

3. Intraday Services

It doesn't let you to keep your stock for 2-3 days. With the Intraday services you can sell/buy stocks within a same day hassle-free.

4. IPO Services

Whenever a company needs capital then it can be collected in two ways; bank borrowings and share capital. When a firm decides to collect money through going to the public, it comes out in the form of IPO. A client can apply in IPO either online or offline, online IPO subscription is possible through website or mobile app whereas offline IPO application can be placed through filling manual forms at any of the nearest broker's branches. With the help of Angel Broking you can buying or invest in IPO. IPO stands for Initial Public Offering in which company's shares are traded for the first time in Public. A person who invest in IPO he/she enjoy the profit as company grows.

5. Stock Recommendation

Yes, Angel Broking gives you technical and fundamental research guidance in order to strength your portfolio.

6. Robo Advisory

Robo advisory gives you automated-algorithm financial planning services that help you to manage your portfolio, save time and money.

7. PMS (Portfolio management services)

It offers portfolio management services to individuals who are looking for tailor made solutions to meet their investment goals.

Angel Broking offers PMS services to offer customized investment advice to high net worth individuals. Professional portfolio managers create a personalized investment portfolio mixing several investment avenues such as equity, bonds, fixed deposits, etc. to meet unique needs. The broker provides different PMS strategies such as large cap, diversified strategy, small-midcap strategy, and Angel Lotus Portfolio that blends value and growth investing.

8. Margin Trading Facility

The full-service brokerage house provides margin-trading facility to people to allow them to trade in shares without paying cash upfront as clients only require to-pay a specified percentage of the transaction and the rest is in the form of margin offered by the broker.

9. ARQ

ARQ is a hi-tech rule based investment engine that uses Modern Portfolio Theory and suggest investment recommendations accordingly. The revolutionary automated tool offers the best advisory services in line with the individual's risk appetite, goal and other specification. You can seek ARQ based recommendations for equity as well as mutual funds. Clients can further check their portfolio health score to diagnose your existing portfolio quality and thereby make it ideal. The tool not just design a one-time portfolio but also regularly track and rebalance the same to keep the portfolio updated with the ongoing market trend and thereby deliver index-beating returns.

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10. Call & Trade

Call & trade service is also available wherein a buy and sell orders in stocks, derivatives, and other investment products can be placed over telephone. However, the broker assisted trading is not at all free and chargeable at Rs. 20 each order. This is the additional charges from the brokerage levied.

IV.About the Department

Corporate Planning and Strategies- Creating a strategy for meeting business goals and improving business and overall performance on the digital products (Angel One Mobile Application, Angel Spark, Trade Angel Broking Website).

Role – Business Analyst Intern (more on Data Analyst side)

Prime Responsibility - Data analytics for a product driven trading platform.

Day to day tasks of the team is to Identify, develop and execute data analysis to uncover areas of business opportunity. Learn and understand a broad range of Angel Broking's data resources and know how, when and which data sources to use.

Deep dive into massive data sets to answer key business questions using MS Office, SQL, Python, Spark, Scala and other data manipulation languages. Build new reports/dashboards to enable emerging business use cases.

Partner with Data Engineering team to ensure timely up-gradation to new data technology.

Present written recommendations and insights to key stakeholders that will help shape effective selection expansion strategies worldwide.

Manage and execute entire projects or components of large projects from start to finish including project management, data gathering and manipulation, modeling and problem solving.

Platforms

- Angel Broking App (mobile trading application) - Angel Broking Mobile app has launched ARQ powered auto advisory tool which completely runs on algorithms which help investors to stay invested in top-performing stocks and mutual funds. It lets the traders and investors to trade on their fingertips anywhere and everywhere in the world. It also provides financial assistance to clients so that you can invest in the right stock. **Angel Broking app** is a highly secured and easy-to use platform which incorporates many innovative features, faster stock trading, market analysis, real-time market coverage, advanced charting, funds transfer facility to multiple banks and much more. The app is available for free to all the clients.
- Trade Angel Broking (Online trading platform) - **Web-based online platform** of Angel Broking is where any client can login and trade through the broker's web platform on any of the supported browser. It is an updated version of earlier platform "**Angel Eye**" and can be traded at **trade.angelbroking.com**. One can trade in equity cash and intraday, derivatives, currency, bonds, IPO, mutual funds, futures & options, commodity and others through this platform.
- Angel Speed-Pro (Desktop Trading Software) - Providing single window trading experience to every client, Angel Speed-Pro is a desktop trading platform with all the features that requires for a competent stock trading. The desktop app can be installed directly from the official website of Angel Broking and after logging in, one can start trading. **Angle Speed-**

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Pro trading terminal gives an integrated single-window trading experience to meet all your investment need.

- Angel Bee (Mutual Fund investment app)- Angel Broking offers a special app for mutual fund investors, Angel Bee, where they can invest and track the investments in mutual funds of various categories. The app comes with the option of both the types of investments, i.e., SIP and lump-sum with other benefits such as zero paper work, tailor made recommendations, and much more.
- Angel Broking ARQ (Investment advisory tool) - Angel Broking has launched an innovative investment engine, called ARQ to build efficient portfolio. ARQ comes up with multiple power including machine learning, cognitive technology, and deep industry insights. The automated advisory tool provides personalized advice to clients based on individual's investment requirements. The tool creates, monitor and rebalance investors' portfolio to offer them index-beating returns.
- Angel Broking Smart-APIs (Build Traing and Investing Platform) -**Angle Broking Smart-API** offers free algorithmic trading to retail investors, advisors, startups, or essentially anyone who wants to get into the algorithmic trading game. This helps in boosting the investing power of retail investors and executes real-time trades via Angel Broking which is deployed in 5 programming languages. Therefore, Smart-API allows you to execute trades through small snippets of code in a language you are familiar with.

Chapter-2

II. Brief about the Technology/Equipment/ Hardware etc.

Software

1. Qubole

Qubole, an Idera Inc. company, provides a simple and secure data lake platform for machine learning, streaming, and ad-hoc analytics.

Qubole is a simple, open, and secure Data Lake Platform for machine learning, streaming, and ad-hoc analytics. The platform provides end-to-end services that reduce the time and effort required to run Data pipelines, Streaming Analytics, and Machine Learning workloads on any cloud. No other platform provides the openness and data workload flexibility of Qubole while radically accelerating data lake adoption, reducing time to value, and lowering cloud data lake costs by 50 percent. Qubole's Platform provides end-to-end data lake services such as cloud infrastructure management, data management, continuous data engineering, analytics, and machine learning with near-zero administration. Qubole is trusted by leading brands such as Expedia, Disney, Oracle and Adobe to spur innovation and to transform their businesses for the era of big data.

Advantages of Qubole

- **Open, Simple, Secure**

Qubole delivers faster access to petabytes of secure, reliable and trusted datasets of structured and unstructured data for Analytics and Machine Learning. Users conduct ETL, analytics, and AI/ML workloads efficiently in end-to-end fashion across best-of-breed open source engines, multiple formats, libraries, and languages adapted to data volume, variety, SLAs and organizational policies.

- **Fast Data Lake Adoption at Scale**

Qubole provides an out-of-the-box workbench and notebooks for data scientists, data engineers, data analysts, and administrators. It supports open source frameworks used by every type of data user including Apache Spark, Presto, Hive/Hadoop, TensorFlow, and Airflow

- **Near Zero Administration**

Qubole automates the installation, configuration, and maintenance of clusters, multiple open source engines, and purpose-built tools for data exploration, ad-hoc analytics, streaming analytics and machine learning. Organizations realize administrator-to-user ratios of 1:200 or higher and near-zero administration experience.

- **Reduce Data Lake Cost by 50%**

Qubole's Workload-aware autoscaling and real-time spot buying drives down compute costs dramatically. Pre-configured financial governance policies and built-in optimization lower data lake cloud computing costs continuously while providing administrator overrides to accommodate special needs.

2. Redash

Redash is an open source SQL-based service for analytics and dashboard visualizations. It offers a familiar SQL editor interface to browse the data schema, build queries, and view results that should be familiar to anyone who's worked with a relational database. Queries can be easily converted into visualizations for quick insights, connected to alerts to notify on specific data events, or managed by API for automated workflows. Live web-based reports can be shared,

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refreshed, and modified by other teams for easy collaboration. Redash is designed to enable anyone, regardless of the level of technical sophistication, to harness the power of data big and small. SQL users leverage Redash to explore, query, visualize, and share data from any data sources. Their work in turn enables anybody in their organization to use the data. Every day, millions of users at thousands of organizations around the world use Redash to develop insights and make data-driven decisions. Redash features:

- **Browser-based:** Everything in your browser, with a shareable URL.
- **Ease-of-use:** Become immediately productive with data without the need to master complex software.
- **Query editor:** Quickly compose SQL and No-SQL queries with a schema browser and auto-complete.
- **Visualization and dashboards:** Create beautiful visualizations with drag and drop, and combine them into a single dashboard.
- **Sharing:** Collaborate easily by sharing visualizations and their associated queries, enabling peer review of reports and queries.
- **Schedule refreshes:** Automatically update your charts and dashboards at regular intervals you define.
- **Alerts:** Define conditions and be alerted instantly when your data changes
- **REST API:** Everything that can be done in the UI is also available through REST API.
- **Broad support for data sources:** Extensible data source API with native support for a long list of common databases and platforms.

3. Jira

Jira is a proprietary issue tracking product developed by Atlassian that allows bug tracking and agile project management.

Jira Software is part of a family of products designed to help teams of all types manage work. Originally, Jira was designed as a bug and issue tracker. But today, Jira has evolved into a powerful work management tool for all kinds of use cases, from requirements and test case management to agile software development.

Jira is offered in four packages:

- **Jira Work Management** is intended as generic project management.
- **Jira Software** includes the base software, including agile project management features (previously a separate product: Jira Agile).
- **Jira Service Management** is intended for use by IT operations or business service desks.
- **Jira Align** is intended for strategic product and portfolio management

Jira Software use cases

Jira for requirements & test case management

- Jira for agile teams
- Jira for project management teams
- Jira for software development teams
- Jira Software for DevOps teams
- Jira for product management teams
- Jira for task management

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- Jira for bug tracking features

4. Google sheet Excel

Google Sheets is an online spreadsheet app that lets you create and format spreadsheets and work with other people. Google Sheets is a free, web-based spreadsheet application that is provided by Google within the Google Drive service. The application is also available as a desktop application on Chrome-OS, and as a mobile app on Android, Windows, iOS, and BlackBerry. The Google Drive service also hosts other Google products such as Google Docs, Slides, and Forms.

Hardware & Equipment

- Laptop
 - Servers
-
- **Brief about the Programming languages/ Tools/ Softwares etc**

1. SQL (Structured Query Language)

SQL stands for **Structured Query Language** which is basically a language used by databases. This language allows to handle the information using tables and shows a language to query these tables and other objects related (views, functions, procedures, etc.). Most of the databases like SQL Server, Oracle, Postgre-SQL, MySQL, Maria-DB handle this language (with some extensions and variations) to handle the data.

SQL is used to communicate with a database. According to ANSI (American National Standards Institute), it is the standard language for relational database management systems.

SQL statements are used to perform tasks such as update data on a database, or retrieve data from a database. Some common relational database management systems that use SQL are:

Oracle, Sybase, Microsoft SQL Server, Microsoft Access, Ingres, etc.

Although most database systems use SQL, most of them also have their own additional proprietary extensions that are usually only used on their system. However, the standard SQL commands such as "Select", "Insert", "Update", "Delete", "Create", and "Drop" can be used to accomplish almost everything that one needs to do with a database.

Structured Query Language (SQL) is the standard language used for writing queries in a databases. It was approved by ISO (International Standard Organization) and ANSI (American National Standards Institute).

2. Presto

Presto is a free and open source distributed SQL query engine designed for the demands of big data. Presto can run analytic queries on data ranging from gigabytes to petabytes, which enables it to search huge data warehouses. Presto offers speeds close to those of commercial solutions without excessive hardware requirements. Presto (or PrestoDB) is an open source, distributed SQL query engine, designed from the ground up for fast analytic queries against data of any size. It supports both non-relational sources, such as the Hadoop Distributed File System

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(HDFS), Amazon S3, Cassandra, MongoDB, and HBase, and relational data sources such as MySQL, PostgreSQL, Amazon Redshift, Microsoft SQL Server, and Teradata.

Presto can query data where it is stored, without needing to move data into a separate analytics system. Query execution runs in parallel over a pure memory-based architecture, with most results returning in seconds. You'll find it used by many well-known companies like Facebook, Airbnb, Netflix, Atlassian, and Nasdaq.

Chapter-3

Brief about the Projects undertaken

ABMA Projects

Tasks done in the project-

- Daily app metrics update -ABMA IOS
- Daily app metrics update –IPO ABMA Android
- Daily app metrics update –TAB
- Daily app metrics update –Spark Web
- Event creation (Creating Analytical Events for Stock Overview for ABMA Android and iOS)
- Event creation (Creating Analytical Events for Mutual Funds for ABMA Android and iOS)
- Event creation (Creating Analytical Events for Reports for ABMA Android and iOS)
- Event creation Creating Analytical Events for NFO(New Fund Offering) for ABMA Android and iOS
- Event creation Creating Analytical Events for NFO(New Fund Offering) for ABMA Android and iOS
- Hamburger Menu and More section Update for Users and Clicks (Data Filling)
- Insta Trade Update for Users and Clicks (Data Filling)
- Angel Assist Metrics Update for Users for ABMA Android and iOS (Data Filling)
- Funds Metrics Update for ABMA Android and iOS (Data Filling)
- Search Metrics Update for ABMA Android and iOS (Data Filling)
- Event-Testing for (ABMA-Android Testing)
- Reports Section Dashboard Update
- Partial Conversion Dashboard Update
- IPO Funnel Query data Insertion
- TPS for Research Section for Short-term Screen, Commodity screen and ARQ-Intraday Screen
- TPS for IPO and Insta-Trade
- TPS for MTF-Order Placement
- Production TPS for Funds View Transaction Screen
- Prod release-International Investments, Phone Pe Direct Integration, Insta-Trade and Angel Assist Update

Spark Projects

Tasks done in the project-

- Event creation for Login Module for Spark (Creating Analytical Events)
- Event creation for Homepage Module for Spark (Creating Analytical Events)
- Event creation for Watch-list Module for Spark (Creating Analytical Events)
- Event creation for Profile Module for Spark (Creating Analytical Events)
- Event creation for Search Module for Spark (Creating Analytical Events)

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- Event creation for Buy/Sell/Option Chain/Stock Details Module for Spark (Creating Analytical Events)
- Event creation for Charts Module for Spark (Creating Analytical Events)
- Event creation for Funds Module for Spark (Creating Analytical Events)
- Event creation for Portfolio Module for Spark (Creating Analytical Events)
- Event creation for Portfolio Analyzer and Portfolio Advisory Module for Spark (Creating Analytical Events)
- Event creation for Stock Alerts Module for Spark (Creating Analytical Events)
- Event creation for Discover Stocks Module for Spark (Creating Analytical Events)
- Event creation for Margin Calculator for Spark (Creating Analytical Events)
- Event creation for Margin Calculator for Spark (Creating Analytical Events)
- Event Creation for Multi-session Logout for Spark(Creating Analytical Events)
- Event Creation for GTT for Spark(Creating Analytical Events)
- Event creation for OFS for Spark(Creating Analytical Events)
- Event creation for Homepage for Spark(Creating Analytical Events)
- Event creation for Buy/Sell Transaction H20 charges for Spark(Creating Analytical Events)
- Event Creation for Firebase (Creating Analytical Events)

Spark Web Projects

Tasks done in the project-

- Event creation for Generic Module for Spark (Creating Analytical Events)
- Event creation for Login Module for Spark (Creating Analytical Events)
- Event creation for Watch-list Module for Spark (Creating Analytical Events)
- Event creation for Profile Module for Spark (Creating Analytical Events)
- Event creation for Search Module for Spark (Creating Analytical Events)
- Event creation Order-pad Module for Spark (Creating Analytical Events)
- Event creation for Charts Module for Spark (Creating Analytical Events)
- Event creation for Funds Module for Spark (Creating Analytical Events)
- Event creation for Portfolio Module for Spark (Creating Analytical Events)
- Event creation for Stock Overview Module for Spark (Creating Analytical Events)
- Event creation for Reports Module for Spark (Creating Analytical Events)
- Event creation for IPO Module for Spark (Creating Analytical Events)
- Event creation for GTT Module for Spark (Creating Analytical Events)
- Event creation for Markets Module for Spark (Creating Analytical Events)
- Event creation for Stock-SIP Module for Spark (Creating Analytical Events)

Brief Description of the Projects (Technical Tasks)

1. Analytical Event Instrumentation

In This we are instrumenting and creating analytical events by observing the UI (User Interface/screen) of different modules for Angel One Mobile Application. While creating the analytical events we are focusing majorly on ABMA, TAB and Spark applications. While creating the events we are assuming some of the parameters by observing the screen/UI given.

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The parameters while creating the events used are the “screen_name”, “event_type”, “event_subtype”, “event_name”, “event_id”, “event_metadata” and “event_property”. For Analytical Event Instrumentation have worked on the following modules given in the projects-

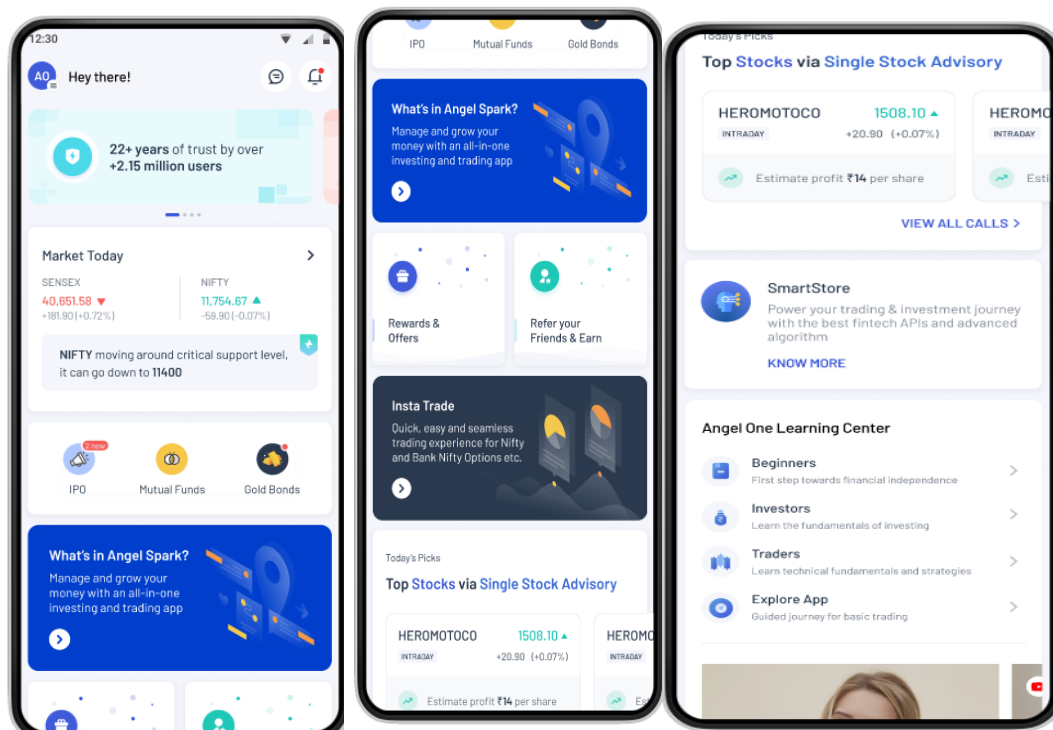
For ABMA Project (Modules Worked on) – Stock-Overview, Stock SIP, Reports, Mutual Funds, Trade-Buddy and NFO

For Spark Project (Modules Worked on) – Login, Watch-list, Homepage, Profile, Search, Order-pad, Option-Chain, Stock-Details, Charts, Funds, Portfolio, Portfolio Analyzer and Portfolio Advisory, Markets, IPO, Reports, Multi-session , OFS, Stock-Alerts, Discover Stocks, Orders, H2O-Buy/Sell Transaction Charges, Stock SIP, Trades and Charges, Insta-Trade, Margin Calculator, GTT, Cue Cards, Profit and Loss, Statements and Notification Center.

For Spark Web Project (Modules Worked on) – Generic, Login, Watch-list, Order-pad, Funds, Search, Portfolio, Stock Overview, Option-Chain, Technical Analysis, Profile, Charts, Reports, IPO, GTT, Markets, Stock-SIP, Homepage.

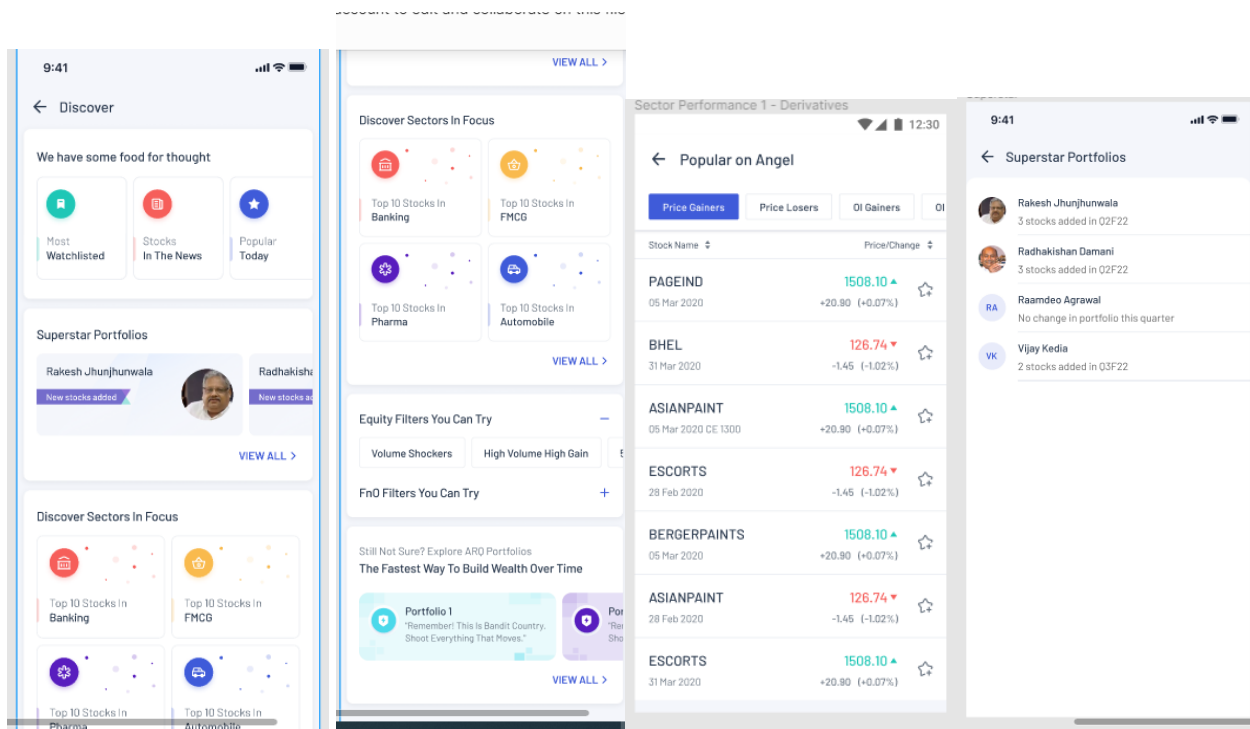
Spark

For **Homepage** Module – Based on this design shared from the application analytical events created on both platforms Android and iOS

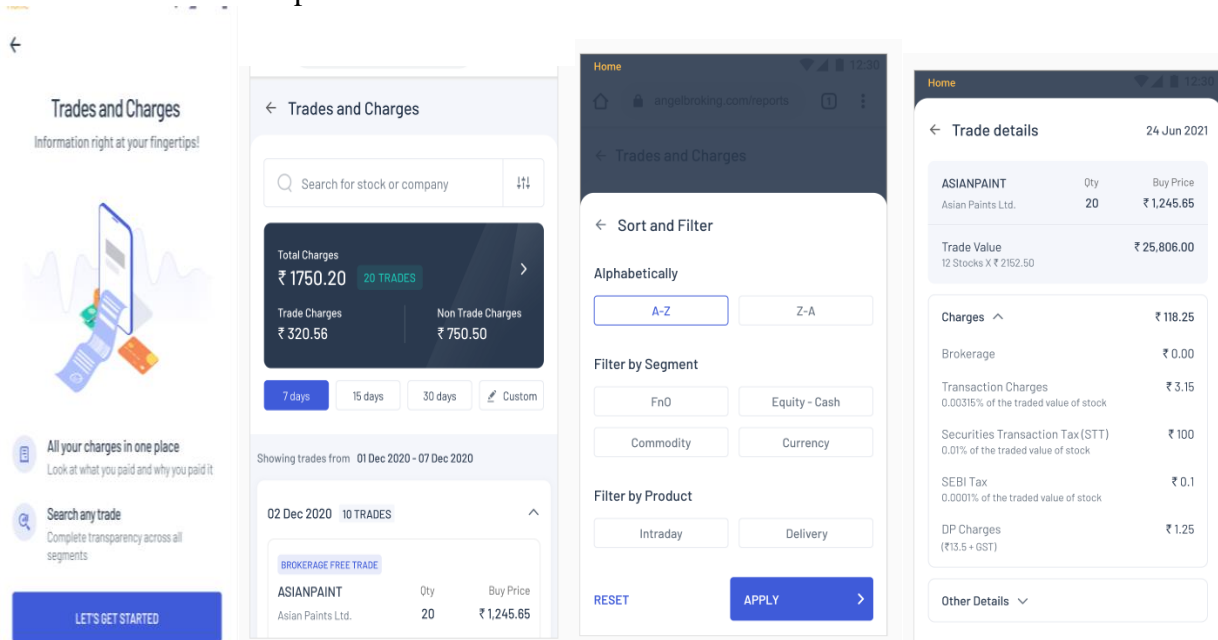


For **Discover Stocks** Module – Based on this design shared from the application analytical events created on both platforms Android and iOS -

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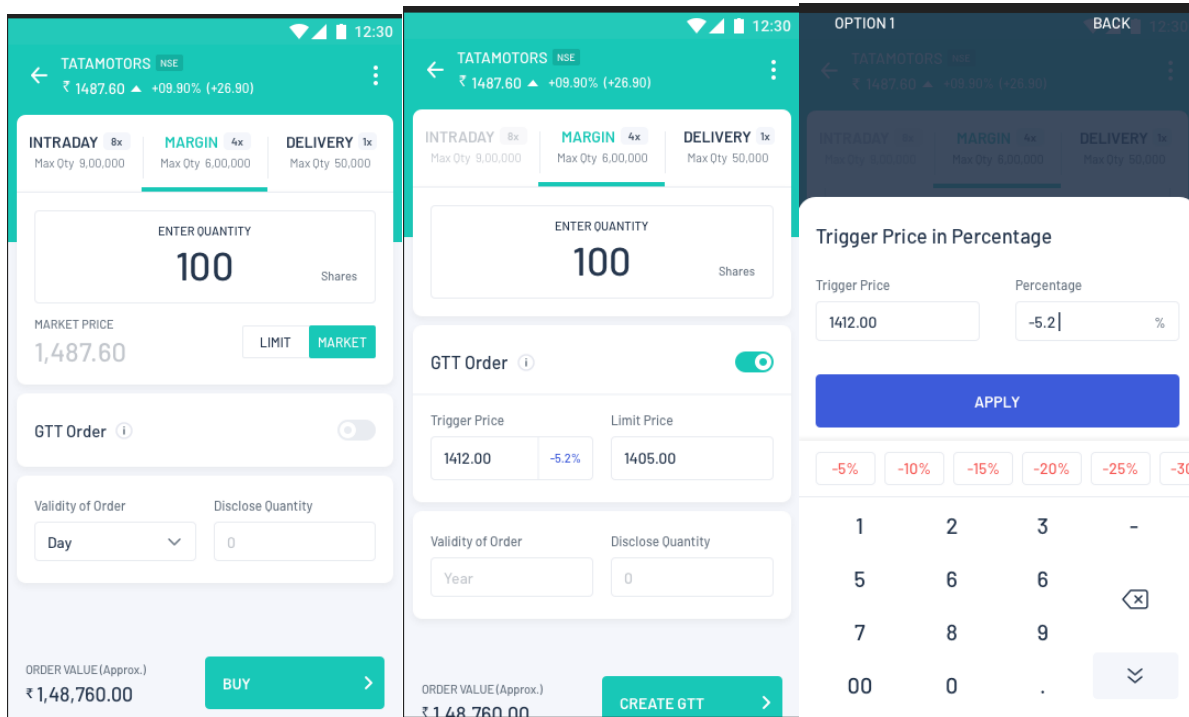


For **Trade and Charges** Module – Based on this design shared from the application analytical events created on both platforms Android and iOS -

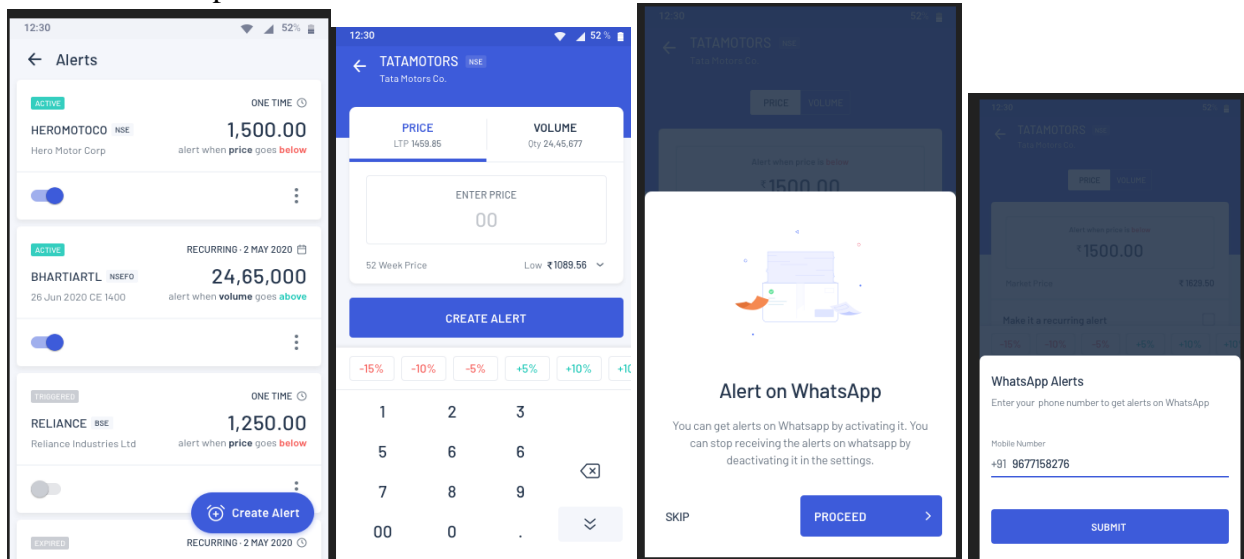


For **GTT (Good Triggered Till)** Module – Based on this design shared from the application analytical events created on both platforms Android and iOS -

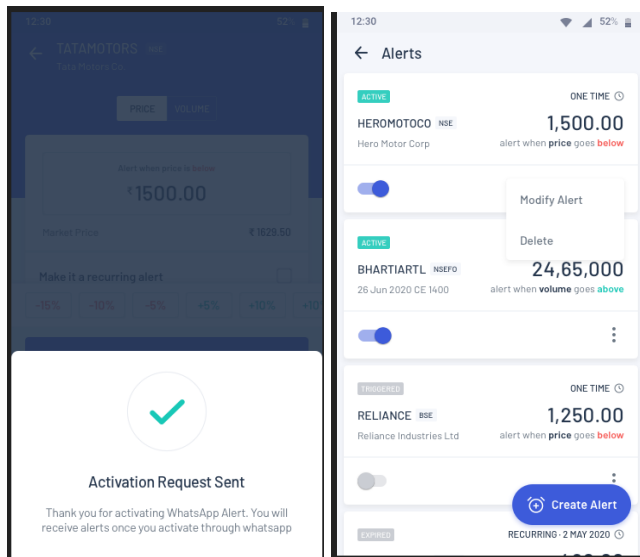
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For **Stock Alerts** Module – Based on this design shared from the application analytical events created on both platforms Android and iOS -

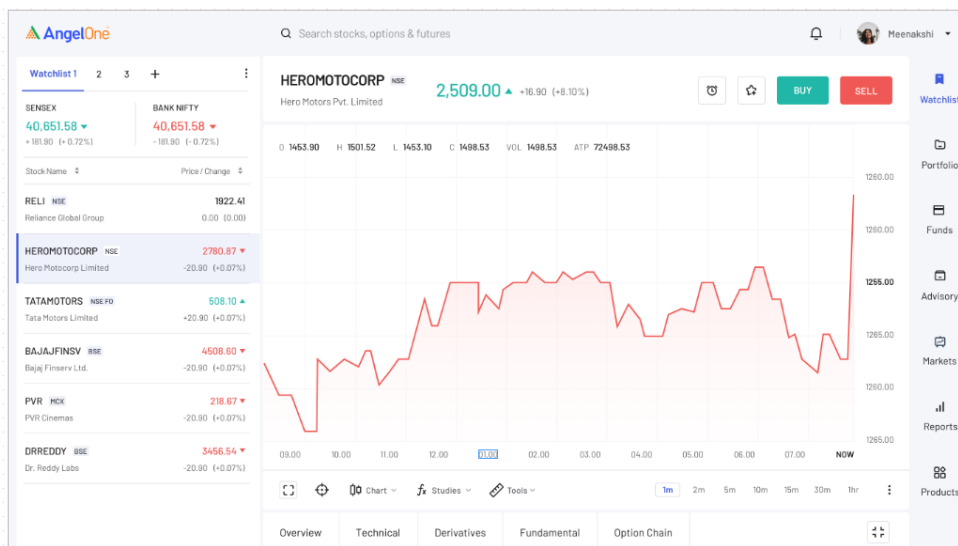


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Spark Web (Website Events)

For Watch-list Module – – Based on this design shared from the Website analytical events.



2. Testing

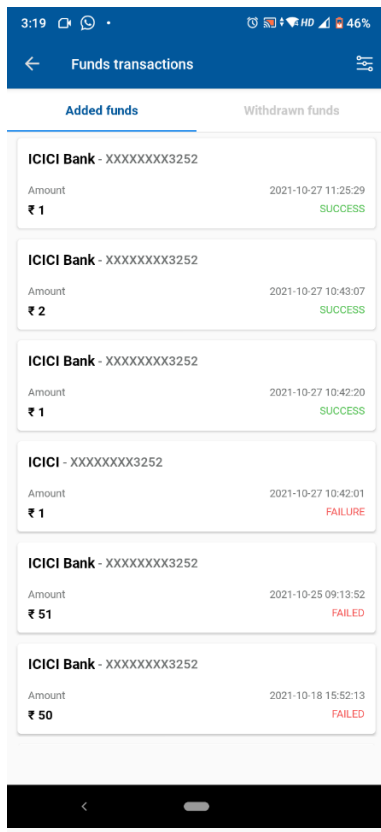
Testing is the process of evaluating and verifying that a software product or application does what it is supposed to do. The benefits of testing include preventing bugs, reducing development costs and improving performance. In testing the main criteria for us is to test the events and check its all parameters by writing the queries to check whether those events are working properly or not. While testing we are checking whether the testing result's is matching with the events parameters. Testing we are implementing on the all platforms to check whether the following modules are working properly or not without any issues from analysis point of view.

3. TPS(Throughput per second time) for Clicks and Users

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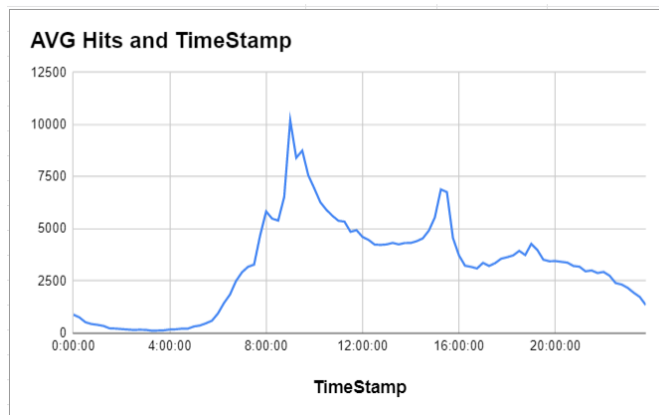
Throughput is one of the key metrics in performance testing. It's used to check how many requests a software will be able to process per second, per minute or hour. In TPS the main criteria for us is to observe the screen/UI given for the module and to create a line chart for the given time intervals and dates for different modules as per given. While creating the TPS we are focusing on the load testing performance as we are analyzing that how many Maximum, Minimum Users and Maximum, Minimum Clicks are there for that particular screen/UI by taking out its data for Users, Clicks and Time Interval.

For Example-Creating TPS for Add Fund Section (Fund Transactions- Added Funds) for the particular screen/UI given below

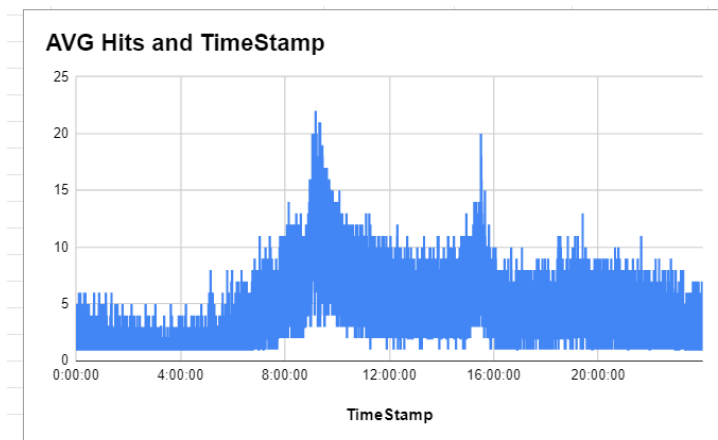


Add Funds Section -(Funds Transactions-Added Funds Screen)

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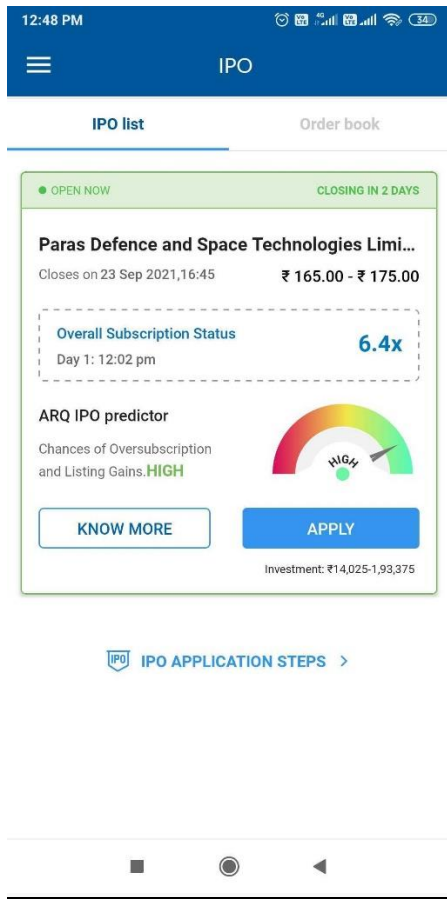
Line Chart for 15 minutes Time Interval



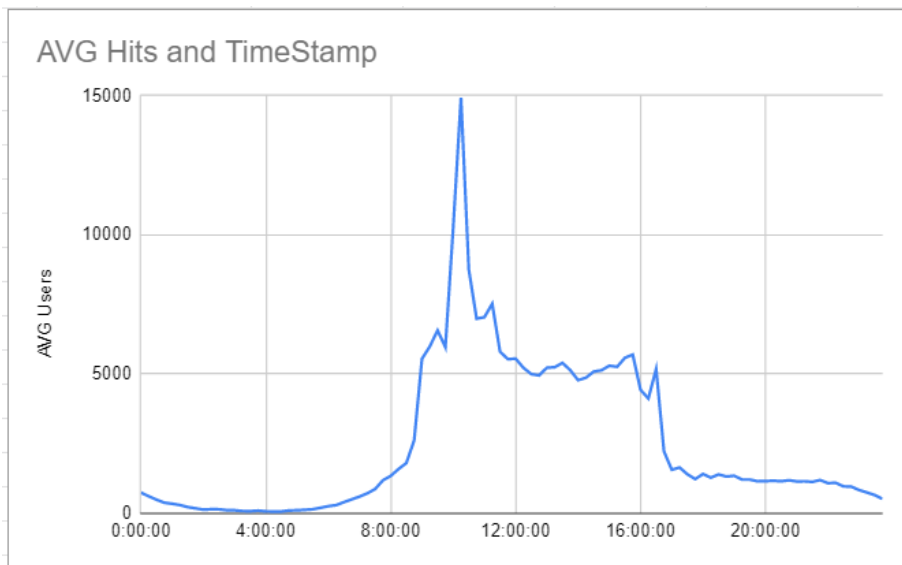
Line Chart for 1 second Time Interval

Another Example Module for IPO-Creating TPS for IPO(IPO-list) for the particular screen/UI given below

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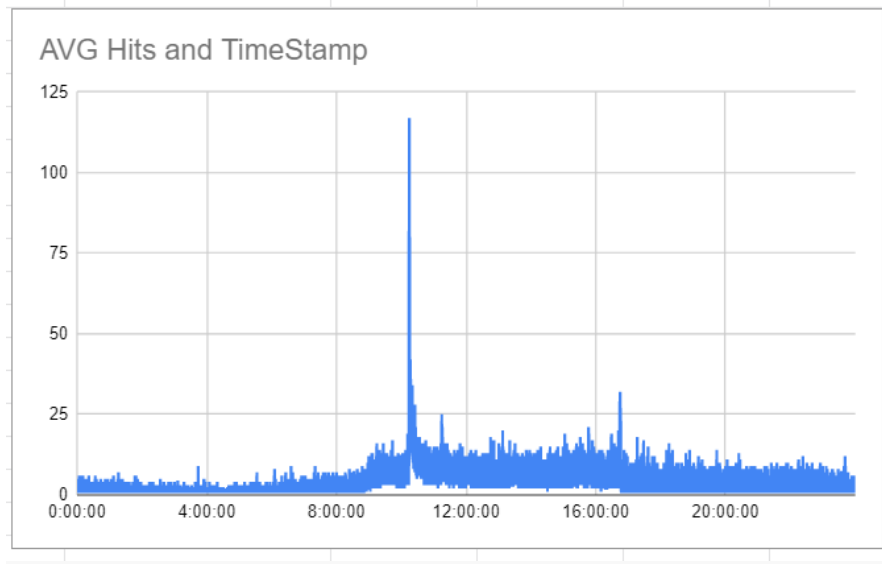


IPO List-Screen

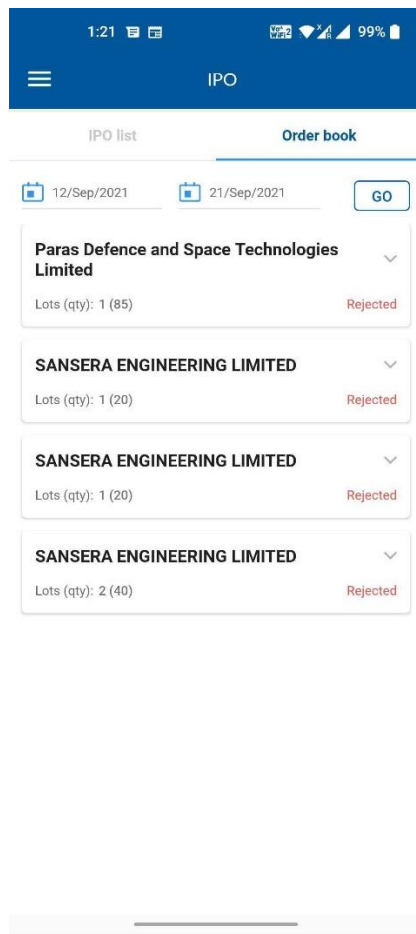


Line Chart for IPO-IPO List for 15 minutes *Time Interval*

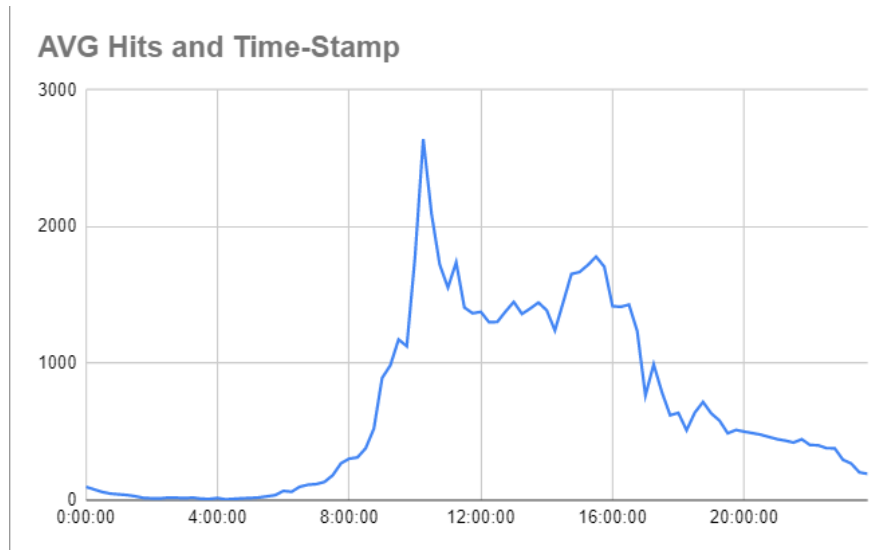
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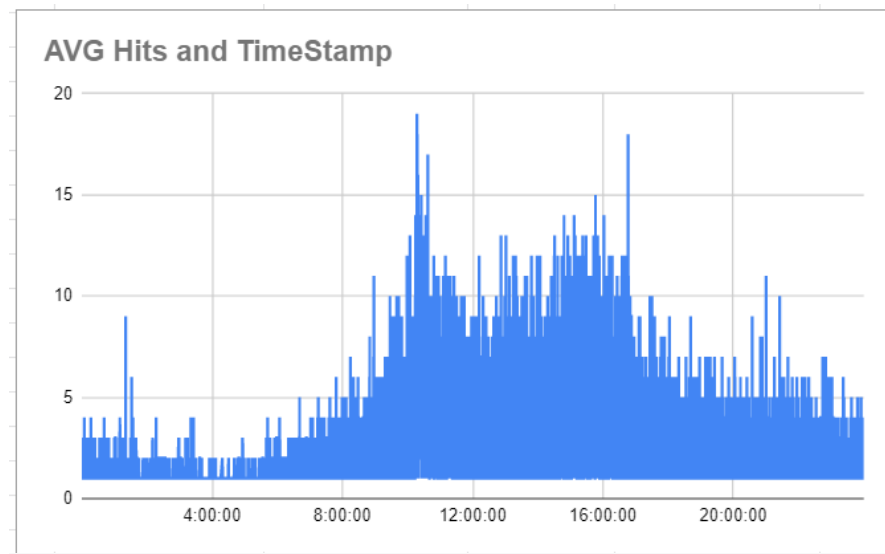
Line Chart for IPO-IPO List for 1 Second *Time Interval*



IPO Order-book Screen



Line Chart for IPO-Order-Book for 15 minutes *Time Interval*



Line Chart for IPO-Order-Book for 1 Second *Time Interval*

Chapter-4

Learning In the In-plant Training

I learnt about how analytics is done across various platforms, how the numbers are monitored and how they vary on a trading day and a non-trading day. Also, every new update has an impact on numbers and how the pattern of the user changes. Also learnt how to create events for various UI (User interface design) or any sketch-flow given for ABMA as well as Spark also learnt how to Insert and Backfill any data for a particular query given. And also learnt how to update and backfill data and also how to take out the weekly numbers taking (average) of numbers of trading days for Market Module and also updating and filling data for Prod release and also monitoring that how it vary on a trading day and non-trading day.

And also learnt how to update and backfill data for Hamburger Menu and More section and I learnt how to make a TPS (through-put) for any particular screen given and how to make a line-chart for that particular TPS too.

I learnt a lot during my internship experience. In fact, I have gained a lot of experience in the past three months

Organizational Skill

This may sound small in comparison to everything else that you need to learn, but is actually super important, especially if you work with data. I can't tell you the number of times I never saved files to a proper path, and have had to run the entire analysis all over again.

Time Management Skill

I am doing my internship and studying simultaneously. This meant that not only did I have client requests to work on, I also had university assignments and tests to complete. I had to be very diligent in maintaining a balance between school and work, and meeting all deadlines on time.

Domain Knowledge

Business domain knowledge is important to have as a data scientist/analyst. Your analysis needs to provide insights that a stakeholder or client can use to solve a business problem. Business domain knowledge isn't necessarily something you need to read up or study (though it would definitely be useful for you to learn it). It is a skill that can be honed over time, with experience.

Communication Skill

Finally, I learnt the importance of having good communication skills. As I mentioned earlier, nobody cares how beautiful your chart is if they don't understand it. You need to have the ability to break down your findings to non-technical and non-data people. This means you will need to explain your findings in a way that is so simple and understandable

Chapter-5

Conclusion & Future Plan of Action

From the following, I can conclude that as a business analyst I have to find ways to improve efficiency, reduce waste, identify and implement solutions, meet project deadlines, and accurately document the necessary requirements.

As a Business Analyst my main role is responsible for bridging the gap between IT and the business using data analytics to assess processes, determine requirements and deliver data-driven recommendations and reports to executives and stakeholders.

Future Plan of Action

I am very open to whatever opportunities the future may hold, especially within this company. I pride myself in being flexible and adaptable. I think the best way of Planning for the future is to make the most of the present. I applied for this internship because it is a perfect fit with my interests and skill set.

In coming months, I'd love to grow into a more senior business analyst role. It's exciting that your company has a strong focus on hands-on experience and continued learning opportunities.