



MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
(A constituent unit of MAHE, Manipal)

A REPORT ON

PROJECT

In

Mobile Application Development

23-April-2025

On the Topic

“Smart Investing-INVESTIFY”

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1. ABSTRACT

Investify is an Android-based financial planning app designed to serve as a personal financial assistant. The app addresses the common challenges individuals face in managing their finances by providing tools to set financial goals, track expenses, and monitor investment portfolios. Users can view a comprehensive portfolio dashboard, receive tailored investment recommendations, and stay updated with the latest business news. With features like budget tracking and expense management, Investify empowers users to make informed financial decisions and achieve their financial objectives efficiently. The intuitive interface and actionable insights make financial planning accessible and streamlined for everyone.

2. INTRODUCTION

In today's fast-paced world, financial literacy and effective money management have become essential skills, especially for young professionals and individuals striving to secure their future. However, the process of planning investments, tracking expenses, and making informed financial decisions can often feel overwhelming without the right tools.

Investify is an intuitive Android application developed to bridge this gap by offering a comprehensive platform for smart and personalized financial planning. Designed with simplicity and usability in mind, the app caters to both novice and experienced users by guiding them through goal-based investments, income analysis, and budgeting. Whether it's planning for long-term goals, saving efficiently, or understanding monthly spending habits, Investify provides users with actionable insights and tailored recommendations to optimize their financial journey.

By integrating features like personalized investment suggestions based on income and risk tolerance, an intuitive expense tracker with visual breakdowns, and real-time stock and mutual fund data via the Alpha Vantage API, Investify empowers users to make smarter financial choices—all within a secure, mobile-friendly environment.

3. PROJECT OBJECTIVE

The app aims to:

- Enable users to set and manage **personalized financial goals**, such as education, home purchase, vacation, or emergency funds, with clear timelines and description.
- Offer actionable **investment recommendations**, including suggested monthly investment amounts needed to achieve user-defined goals



- Track and summarize **monthly expenses**, helping users stay within budget and improve their financial discipline
- Deliver up-to-date **business news** and financial insights to keep users informed about market trends and opportunities
- Simplify **financial planning** through an intuitive interface, making it easy for users to monitor progress and adjust strategies as needed.

4. TOOLS AND TECHNOLOGIES USED

Technology	Purpose
Android Studio (Kotlin DSL)	IDE for development
Java	Primary programming language
Alpha Vantage API	To fetch real time data
RecyclerView	To display dynamic lists
Fragments & ViewPager	Tab navigation
Intents	Data transfer between activities

5. SYSTEM REQUIREMENTS

- **Minimum Android Version:** API 21 (Lollipop)
- **Target Android Version:** API 35
- **IDE:** Android Studio Giraffe or higher
- **SDK Tools:** Android SDK Platform 35
- **Hardware Requirements:**
 - Android device/emulator with internet
 - Minimum 2GB RAM for emulator



6. PROJECT MODULES/FEATURES

User Login/ Register user:

This is the initial screen shown to user on installing the app. It allows the user to register and use the app.

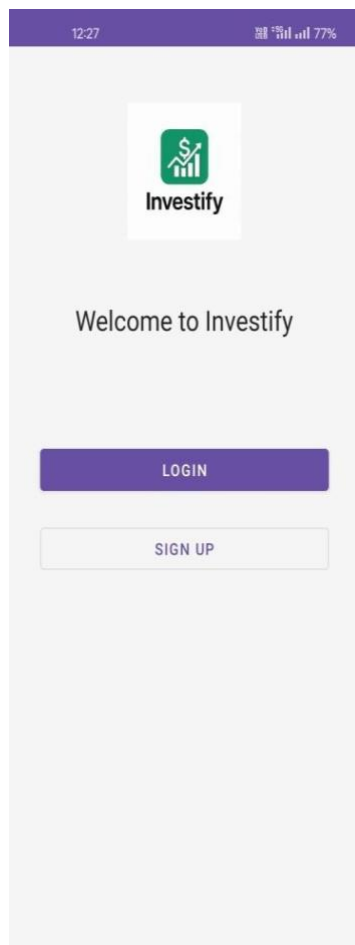


Figure 1: Home Screen

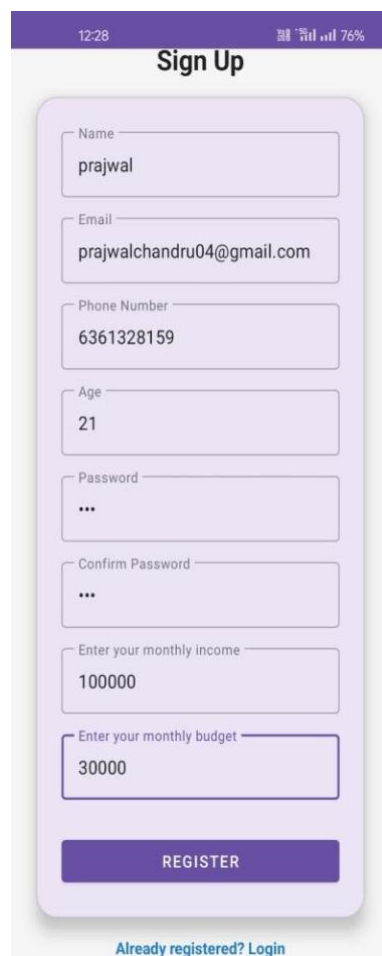


Figure 2: Sign Up Page

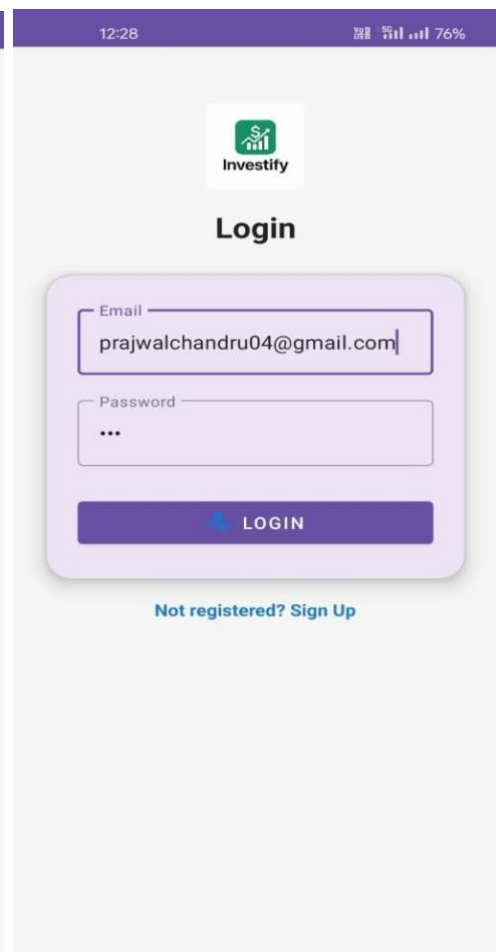


Figure 3: Encrypted Password



Dashboard/ Investment Planner:

This screen allows you to plan your investment, or take a quiz, or get latest update on new, or track your expenses.



Figure 4: Dashboard

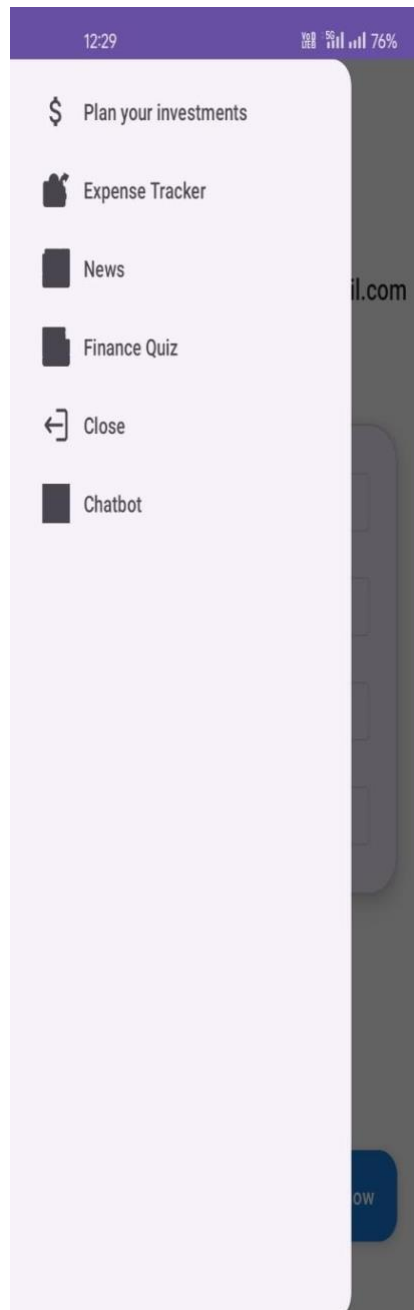


Figure 5: Side Bar

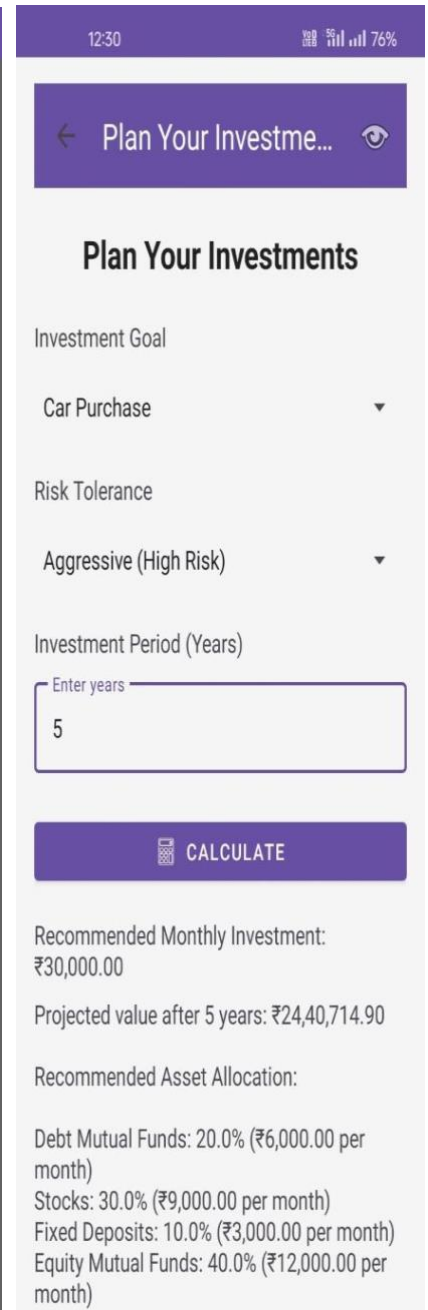


Figure 6: Investment Tracker



Expense Tracker:

It allows to manage overhead expense and manages monthly/yearly budget.

The interface shows a purple header with the time 12:31, signal strength, and 76% battery. Below the header, a white square placeholder is visible. The main content area displays '₹ 24500.00 left' in green, with 'Total Expense: ₹ 5500.00' below it. A section titled 'Add New Expense' contains a text input field with '500' and a dropdown menu set to 'Petrol'. Below this is a 'SELECT DATE' button and 'Date: 22/4/2025'. A large purple button labeled 'ADD EXPENSE' is at the bottom. At the very bottom, an 'Expense Analysis' donut chart shows a large red segment for 'Party' and a small orange segment for 'Petrol'.

Figure 7: Expense Tracker

This view shows the same app interface as Figure 7, but with a white dialog box titled 'Edit or Delete' in the foreground. The dialog asks 'What do you want to do?' and has three buttons: 'CANCEL', 'DELETE', and 'EDIT'. In the background, the 'Expense Analysis' donut chart is visible, showing a large red segment for 'Party' and a small orange segment for 'Petrol'. Below the chart, the 'Recent Expenses' section lists two items: '23/4/2025 - Party: ₹5000.0' and '22/4/2025 - Petrol: ₹500.0'.

Figure 8: Edit Expenses



News / Quiz:

This feature gives real time news updates and the quiz page allows the user to assess his knowledge of finance.

12:32 76%

Empowering Traders With Expert Guidance On Cryptocurrency Trading Strategies

These days, in the unpredictable world of crypto, no trader had an advantage like this with the advent of AI and Big Data. Whether ...

Benzinga 20250422T175029

Analyst Sticks With Nvidia Despite Fallout From China Curbs - NVIDIA (NASDAQ:NVDA), Advanced Micro Devices (NASDAQ:AMD)

Nvidia stock falls 14% after H20 shipment ban to China; BofA analyst sees volatility as a buying opportunity despite risks. Nvidia's r...

Benzinga 20250422T185507

Deadline Alert: Fluence Energy, Inc. (FLNC) Investors Who Lost Money Urged To Contact Glancy Prongay & Murray LLP About Securities Fraud Lawsuit - Fluence Energy (NASDAQ:FLNC)

LOS ANGELES, April 22, 2025 (GLOBE NEWSWIRE) – Glancy Prongay & Murray LLP reminds investors of the upcoming May 12, ...

Benzinga 20250422T173316

Guidewire Doubles Down On Japan,

Figure 9: News

12:32 76%

Finance Quiz

Question 1 of 20

What is the current Securities Transaction Tax (STT) rate for equity delivery-based transactions in India?

☐ 0.1%

☐ 0.2%

☐ 0.5%

☐ 1.0%

NEXT

Figure 10: Quiz

12:32 76%

Quiz Results

Your Score

5 / 20

Keep learning! Consider reviewing basic financial concepts.

Leaderboard

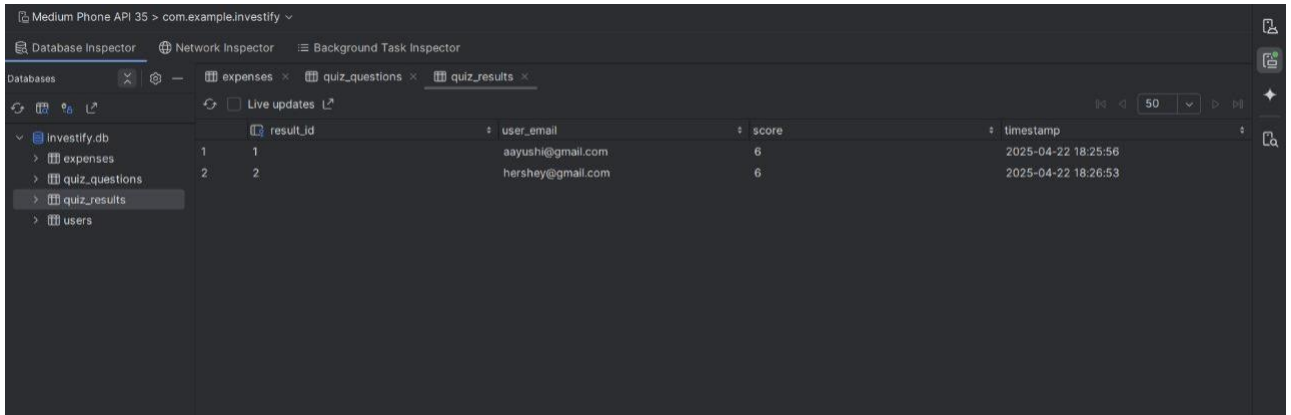
Rank	Name	Score
1	prajwal	5

TRY AGAIN **DASHBOARD**

Figure 11: Quiz Leaderboard

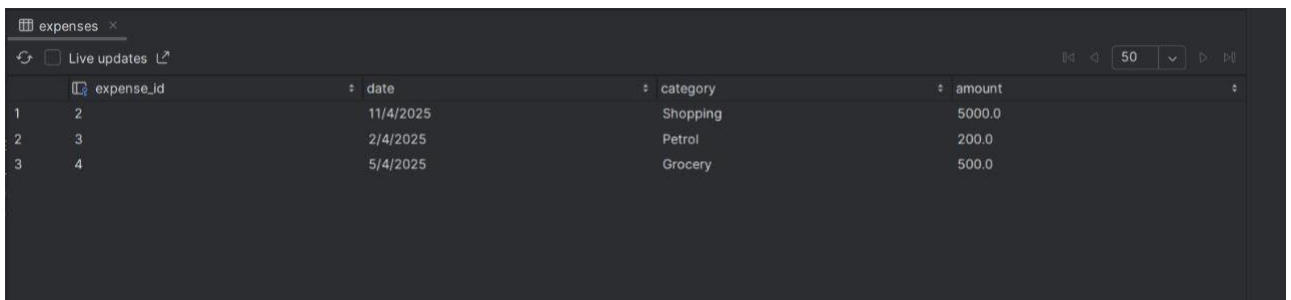


7. DATABASE DESIGN



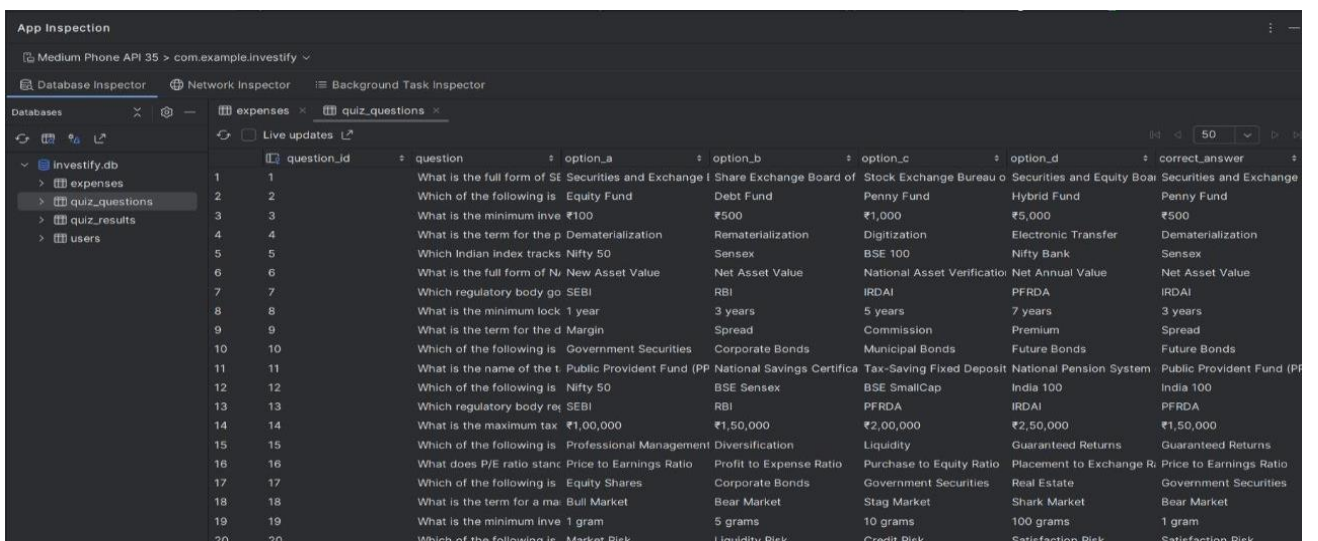
result_id	user_email	score	timestamp
1	aayushi@gmail.com	6	2025-04-22 18:25:56
2	hershhey@gmail.com	6	2025-04-22 18:26:53

Figure: Sample data input



expense_id	date	category	amount
2	11/4/2025	Shopping	5000.0
3	2/4/2025	Petrol	200.0
4	5/4/2025	Grocery	500.0

Figure: Expense Tracker



question_id	question	option_a	option_b	option_c	option_d	correct_answer
1	What is the full form of SE	Securities and Exchange	Share Exchange Board of	Stock Exchange Bureau o	Securities and Equity Boar	Securities and Exchange
2	Which of the following is	Equity Fund	Debt Fund	Penny Fund	Hybrid Fund	Penny Fund
3	What is the minimum inve	₹100	₹500	₹1,000	₹5,000	₹500
4	What is the term for the p	Dematerialization	Rematerialization	Digitization	Electronic Transfer	Dematerialization
5	Which Indian index tracks	Nifty 50	Sensex	BSE 100	Nifty Bank	Sensex
6	What is the full form of N	New Asset Value	Net Asset Value	National Asset Verificatio	Net Annual Value	Net Asset Value
7	Which regulatory body go	SEBI	RBI	IRDAI	PFRDA	IRDAI
8	What is the minimum lock	1 year	3 years	5 years	7 years	3 years
9	What is the term for the d	Margin	Spread	Commission	Premium	Spread
10	Which of the following is	Government Securities	Corporate Bonds	Municipal Bonds	Future Bonds	Future Bonds
11	What is the name of the t	Public Provident Fund (PP	National Savings Certifica	Tax-Saving Fixed Deposit	National Pension System	Public Provident Fund (PP
12	Which of the following is	Nifty 50	BSE Sensex	BSE SmallCap	India 100	India 100
13	Which regulatory body reg	SEBI	RBI	PFRDA	IRDAI	PFRDA
14	What is the maximum tax	₹1,00,000	₹1,50,000	₹2,00,000	₹2,50,000	₹1,50,000
15	Which of the following is	Professional Management	Diversification	Liquidity	Guaranteed Returns	Guaranteed Returns
16	What does P/E ratio stanc	Price to Earnings Ratio	Profit to Expense Ratio	Purchase to Equity Ratio	Placement to Exchange R	Price to Earnings Ratio
17	Which of the following is	Equity Shares	Corporate Bonds	Government Securities	Real Estate	Government Securities
18	What is the term for a ma	Bull Market	Bear Market	Stag Market	Shark Market	Bear Market
19	What is the minimum inve	1 gram	5 grams	10 grams	100 grams	1 gram
20	Which of the following is	Market Risk	Liquidity Risk	Credit Risk	Satisfaction Risk	Satisfaction Risk

Figure: Quiz Data Base



8. TESTING AND OUTPUT

How It Was Tested:

- Manual testing on Android Emulator
- API verification through real time data
- Tests how different components interact (e.g., how the backend handles a user's budget order and updates the portfolio).

Sample Output:

- Investing options based on risk taking capacity and capital available
- Real time news and updates available
- Leaderboard for quiz

9. CONCLUSION

What I Learned:

- Fetching financial data using **APIs like Alpha Vantage** to power stock/mutual fund recommendations.
- Implementing tab layouts using **fragments and ViewPager2** for organizing features like Expense Tracker, and Investment Suggestions.
- Creating and managing **RecyclerView adapters** to display dynamic data such as expenses and stock suggestions.
- Handling **data flow between activities and fragments** using Intents and Bundles for a seamless user experience.

Challenges Faced:

- Managing **shared data across fragments**, especially when updates from one tab needed to reflect in another. Designing dynamic tabs with shared data.
- Resolving **Fragment Lifecycle issues** such as data reset on tab change or activity recreation.
- Designing dynamic tabs with **custom UI logic** to fit specific financial planning needs.

Future Scope:

- Improving the **frontend design** using **Material UI components** for a more polished and modern look
- Expanding the app's scope to support **multiple investment plans per user**, each with detailed analytics and risk profiling.
- Aligning data from the **chatbot** with other app modules for a consistent experience.



10. REFERENCES

- Android Documentation: [Develop for Android](#) | [Android Developers](#)
- [StackOverflow](#), [GeeksForGeeks](#) for code snippets.