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Ref. No. MES IMCC / 172/ 2025 – 26/

Date:

### CERTIFICATE

This is to certify that the Project entitled "**“MonthVest”**" is completed by "**“Tejaswini Patil & Shrushti Mangalekar”**" of S.Y. M.C.A. Semester I for the Academic Year 2025-26 at MES' Institute of Management & Career Courses (IMCC), Pune - 411038.

To the best of our knowledge, this is an original study done by the said student and important sources used by her have been duly acknowledged in this report.

The report is submitted as a part of course ITP31 Mini Project for the Academic Year 2025-26 as per the rules and guidelines prescribed by the institute.

Ms. Minakshi More  
Project Coordinator

Ms. Manasi Shirurkar  
Program Coordinator

Dr. Ravikant Zirmite  
Head, Dept. Of MCA



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## Index

### 1. Project Scope

1.1 Title

1.2 Overview

1.3 Tech Stack

1.4 Data Schema

### 2. UML Diagrams

2.1 ERD

2.2 Use Case Diagram

2.3 Data Dictionary

### 3. User Interface

3.1 Home Page

3.2 Registration Page

3.3 Login Page

3.4 Dashboard Page

3.5 Add Investment Page

3.6 Edit / Delete Investment Page

3.7 Monthly Performance Page

3.8 User Profile Page



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### 1. Project Scope

#### 1.1 Title

MonthVest – Smart Monthly Investment Analyzer

#### Overview:

**MonthVest – Smart Monthly Investment Analyzer** is a web-based personal investment management system designed to help users efficiently track and analyze their financial investments. The platform enables users to record investment details across various instruments such as **Gold, Stocks, Mutual Funds, and Fixed Deposits** in a single centralized system.

It provides an organized dashboard to monitor total investments, returns, and profit or loss, while offering monthly performance insights and category-wise investment distribution. The system also delivers personalized investment suggestions based on user categories such as **Student, Adult, Senior Citizen, and Women**, supporting informed and structured financial planning.

#### Project Objectives:

- Centralized investment tracking
- Automated calculation of returns
- Category-wise investment analysis
- Monthly performance insights
- User-specific investment insights
- Secure data storage and access

#### User Roles & Responsibilities

- Account Security & Integrity
- Accurate Investment Data Entry
- Portfolio Monitoring & Updates
- Responsible of Investment Suggestions
- Compliance with System Guidelines



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### Core Features:

1. Authentication & User Profiles
  - o Secure user registration and login
  - o Personalized user profiles with category selection
2. Investment Management System
  - o Add, edit, and delete investments
  - o Support for multiple investment types (Stocks, Mutual Funds, FD)
3. Intelligent Dashboard
  - o Automated calculation of:
    - Total invested amount
    - Current value
    - Profit / Loss
  - o Visual representation using charts and summaries
4. Category-Wise Investment Analysis
  - o Smart categorization of investments
  - o Clear distribution of funds across investment categories
5. Monthly Performance Tracking
  - o Month-wise profit and loss insights
  - o Identification of best and low-performing investment categories
6. Personalized Investment Suggestions
  - o Recommendations based on user category:
    - Student
    - Adult
    - Senior Citizen
    - Women
  - o Helps optimize investment strategy and returns
7. Reports & Data Insights
  - o Summary reports of investment performance
  - o Downloadable data for future reference



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### Technology Stack:

- **Frontend:**
  - **HTML5:** Structures the dashboard, sidebar, and chart sections.
  - **CSS3:** Styles the layout and adds responsive design and effects.
  - **JavaScript (Vanilla JS):** Handles dynamic content, calculations, and DOM updates.
  - **Chart.js:** Displays interactive charts for investments.
  - **Font Awesome:** Provides icons for sidebar and UI elements.
- **Backend:**
  - **Python:** Runtime language for backend logic, calculations, and data processing.
  - **Flask:** Framework to handle API routes, HTTP requests, and business logic.
  - **Yahoo Finance API:** Used to fetch real-time stock and market data for portfolio updates.
  - .
- **Database:**
  - **SQLite:** Relational database to store users, investment records, and transaction history.
- **Tools:**
  - **Postman:** For testing and debugging APIs (including Yahoo Finance endpoints).
  - **Git/GitHub:** For version control and project management.



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### Database Schema Overview:

The application utilizes a relational database schema implemented in SQLite. The schema is designed to separate user authentication data from investment data while maintaining referential integrity through proper foreign key relationships.

#### Table: user

- Purpose:** Stores registered user credentials and profile information, including name, email, and user category (Student, Adult, Senior Citizen, Women) for authentication and personalization.

#### Table: investment

- Purpose:** Stores all investment records for users, including investment type (Stocks, Mutual Funds, FD), invested amount, current value, duration, and start date.

#### Table: category

- Purpose:** Stores investment categories and metadata to classify investments and enable category-wise analysis.

#### Table: transaction\_history

- Purpose:** Maintains a record of all investment transactions for a user, enabling tracking of profits, losses, and monthly trends.

**Relationships:** Each user can have multiple investments (1-to-many relationship). Each investment belongs to a category (many-to-1 relationship). Transaction history is linked to user and investment for detailed tracking.



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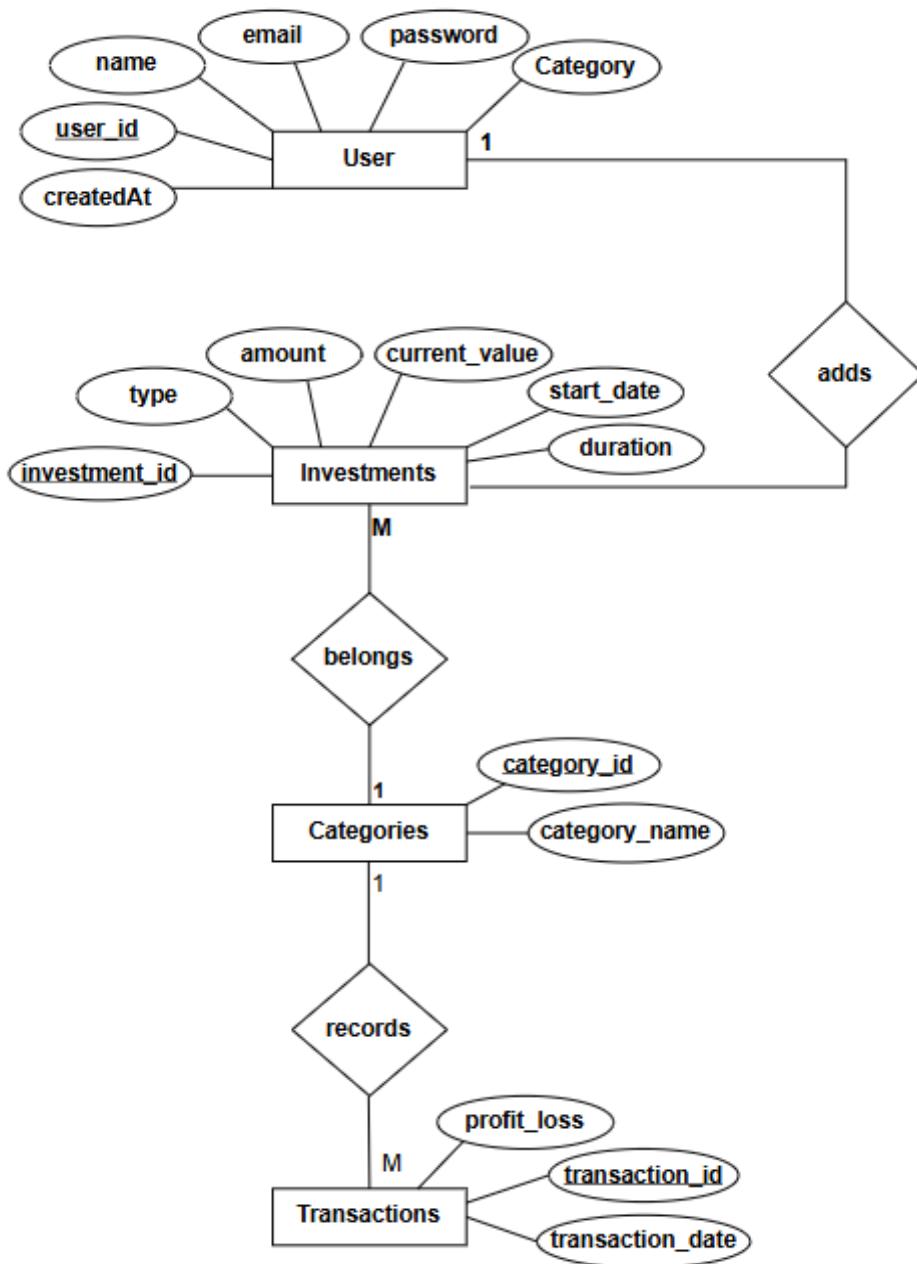
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### 2. UML Diagram

#### 2.1 ERD



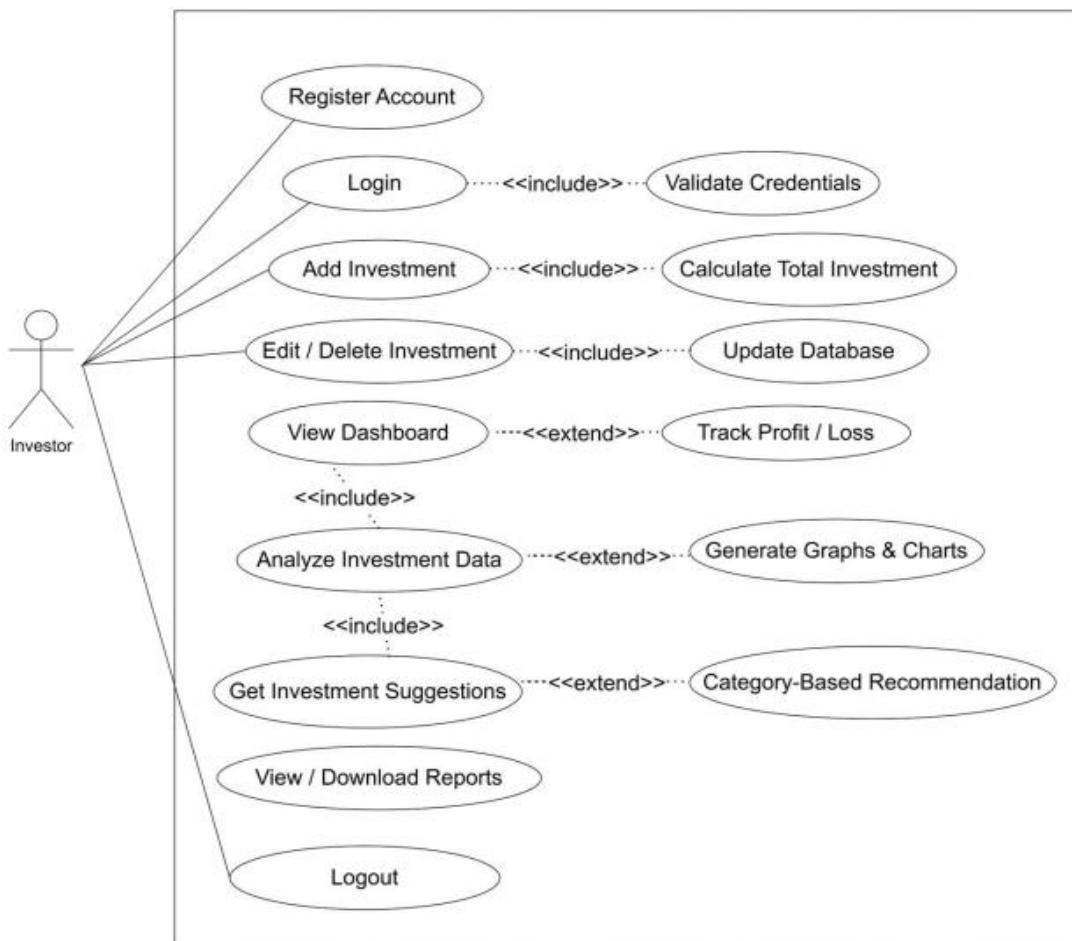


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### 2.2 Use Case Diagram





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### 2.3 Data Dictionary

#### 1. User Table

Column Name	Data Type	Constraints	Description
User_id	INT	PRIMARY KEY	Unique ID for each user
User_Name	VARCHAR	NOT NULL	Full name of the user
Email	VARCHAR	UNIQUE, NOT NULL	User's email address
Password	VARCHAR	NOT NULL	Encrypted password for authentication
Category	VARCHAR	NOT NULL	Student / Adult / Senior / Women

#### 2. Investment Table

Column Name	Data Type	Constraints	Description
Investment_id	INT	PRIMARY KEY	Unique investment ID
User_id	INT	FOREIGN KEY, NOT NULL	Reference to user
Type	VARCHAR	NOT NULL	Investment type (Stocks, MF, FD, Gold)
Amount	FLOAT	NOT NULL	Invested amount
Current_value	FLOAT	NOT NULL	Current market value
Start_date	DATE	NOT NULL	Investment start date
Duration	INT	NOT NULL	Investment duration



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### 4.stocks Table

Column Name	Data Type	Constraints	Description
id	INT	PRIMARY KEY	Unique transaction ID
User_id	INT	FOREIGN KEY, NOT NULL	Reference to user
symbol	INT	FOREIGN KEY, NOT NULL	Reference to investment
quantity	INT	NOT NULL	Count of shares
Buy_price	INT	NOT NULL	Price of share



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### 3. User Interface:

#### 3.1 Home Page:

MonthVest

Login Sign up

Track, Analyze & Grow Your Investments Smartly

MonthVest helps you manage your investment portfolio with ease. Monitor your assets, analyze your monthly growth, and make wiser decisions using our smart tools and clean dashboards.

Get Started Create Account

#### 3.2.Sign up Page

MonthVest

Sign Up

Full Name

Email ID

Password

Confirm Password

Select Category

Sign Up

Already have an account? [Login](#)



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### 3.3.log in Page

MonthVest

Login

Email ID

Password

Login

Don't have an account? [Sign up](#)

### 3.4 Dashboard Page

Welcome, Sumit Sharma

Total Investment	Current Value	Total Profit / Loss	ROI
₹75000.0	₹79000.0	₹4000.0	5.33%

Your Investments

Type	Amount	Current Value	Date
Mutual Fund	₹18000.0	₹16800.0	2024-01-10
Gold	₹26000.0	₹28900.0	2023-12-05
Fixed Deposit	₹31000.0	₹33300.0	2023-11-20

Investment Distribution

Mutual Fund Gold Fixed Deposit

Portfolio Growth

Portfolio Growth



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### 3.5 Add Investment Page

This screenshot shows the 'Add New Investment' form within a web application. The sidebar on the left lists navigation options: Dashboard, Add Investment, Edit / Delete, Portfolio Trends, Investment Tips, Reports, and User Profile. The main form area contains fields for 'Investment Type \*' (a dropdown menu), 'Invested Amount \*' (text input), 'Start Date \*' (date picker), 'Current Value \*' (text input), 'Duration (Years) \*' (text input), 'Tenure (Months) \*' (text input), and 'Expected Return Rate (%) \*' (text input).



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### 3.6 Edit / Delete Investment Page

#### Edit/Delete Investments

Search by investment type.

All Types

Investment Type	Amount	Current Value	Start Date	ROI %	Actions
Mutual Fund	\$18000.00	\$16800.00	2024-01-10	-6.67%	<button>Edit</button> <button>Delete</button>
Gold	\$26000.00	\$28900.00	2023-12-05	11.15%	<button>Edit</button> <button>Delete</button>
Fixed Deposit	\$31000.00	\$33300.00	2023-11-20	7.42%	<button>Edit</button> <button>Delete</button>



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### 3.7 Monthly Performance Page

MonthVest

Sumit Sharma Logout

Dashboard

Add Investment

Edit/Delete

Portfolio Trends

Investment Tips

Reports

#### Portfolio Trends

**Best Performing**  
Gold (2900)

**Worst Performing**  
Mutual Fund (-1200)

**Total Invested**  
75000

**Total Returns**  
4000

Profit/Loss

Category	Value
Gold	2900
Mutual Fund	-1200

### 3.8 Reports

#### Financial Reports

[Download CSV](#) [Download PDF](#)

##### Total Investments

₹75000.00

##### Category Distribution

Category	Total Amount
Mutual Fund	₹18000.00
Gold	₹26000.00
Fixed Deposit	₹31000.00

##### Profit / Loss Summary

Category	Profit / Loss (₹)
Mutual Fund	₹-1200.00
Gold	₹2900.00
Fixed Deposit	₹2300.00



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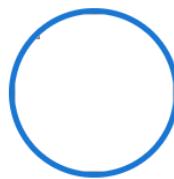
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### 3.9 User Profile

#### User Profile

  
Click to change avatar

**Full Name**  
Sumit Sharma

**Email**  
sumit@gmail.com

**Age**

**Gender**  
Male

**Category**  
Student

Save Changes Cancel



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### User database table

Table: user					
	id	fullname	email	password	category
1	1	Sumit Sharma	sumit@gmail.com	scrypt:...	Student
2	2	Anita Verma	anita@gmail.com	scrypt:...	Student
3	3	Rohit Mehra	rohit@gmail.com	scrypt:...	Student
4	4	Neha Gupta	neha@gmail.com	scrypt:...	Student
5	5	Aman Singh	aman@gmail.com	scrypt:...	Student
6	6	Priya Nair	priya@gmail.com	scrypt:...	Adult
7	7	Karan Patel	karan@gmail.com	scrypt:...	Adult
8	8	Sneha Kapoor	sneha@gmail.com	scrypt:...	Adult
9	9	Vikas Yadav	vikas@gmail.com	scrypt:...	Adult
10	10	Meera Joshi	meera@gmail.com	scrypt:...	Adult
11	11	Rahul Soni	rahul@gmail.com	scrypt:...	Women
12	12	Isha Bhat	isha@gmail.com	scrypt:...	Women
13	13	Harsh Kumar	harsh@gmail.com	scrypt:...	Women
14	14	Nisha Rani	nisha@gmail.com	scrypt:...	Women
15	15	Sahil Khan	sahil@gmail.com	scrypt:...	Women
16	16	Divya Tripathi	divya@gmail.com	scrypt:...	Senior Citizen
17	17	Ajay Pawar	ajay@gmail.com	scrypt:...	Senior Citizen



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### Investments database table

Table: investments										
	id	investment_type	amount	start_date	current_value	duration_years	tenure_months	expected_rate	notes	user_id
1	1	Mutual Fund	18000.0	2024-01-10	16800.0	1	12	12.0	Growth plan	1
2	2	Gold	26000.0	2023-12-05	28900.0	2	24	9.0	Gold SIP	1
3	3	Fixed Deposit	31000.0	2023-11-20	33300.0	1	12	11.0	1-year FD	1
4	4	Mutual Fund	12000.0	2024-02-12	13000.0	1	12	10.0	Equity fund	2
5	5	Gold	22000.0	2023-10-18	25200.0	2	24	8.0	Digital gold	2
6	6	icici stock	28000.0	2023-09-15	31500.0	1	12	11.0	stock investment	2
7	7	Mutual Fund	18000.0	2024-01-25	19700.0	1	12	11.0	Index fund	3
8	8	Gold	27000.0	2023-12-10	31000.0	2	24	9.0	Gold bonds	3
9	9	Fixed Deposit	32000.0	2023-10-01	36000.0	1	12	11.0	1-year FD	3
10	10	Mutual Fund	16000.0	2024-02-15	17500.0	1	12	10.0	Balanced MF	4
11	11	Gold	21000.0	2023-11-10	24000.0	2	24	9.0	Jewellery gold	4
12	12	Fixed Deposit	29000.0	2023-08-20	32500.0	1	12	11.0	Fixed plan	4
13	13	Mutual Fund	14000.0	2024-01-20	15400.0	1	12	10.0	Equity plan	5
14	14	Gold	20000.0	2023-09-15	23000.0	2	24	8.0	Gold SIP	5
15	15	Fixed Deposit	26000.0	2023-07-12	29000.0	1	12	11.0	Short term	5
16	16	Mutual Fund	19000.0	2024-03-01	21000.0	1	12	11.0	Large cap	6
17	17	Gold	25000.0	2023-12-20	28500.0	2	24	9.0	Sovereign gold	6
18	18	Fixed Deposit	33000.0	2023-08-05	36800.0	1	12	11.0	Quarterly payout	6
19	19	Mutual Fund	17500.0	2024-01-08	19200.0	1	12	11.0	Bluechip MF	7
20	20	Gold	26000.0	2023-10-25	30000.0	2	24	9.0	Digital gold	7
21	21	Fixed Deposit	31000.0	2023-07-18	34500.0	1	12	11.0	1-year deposit	7
22	22	Mutual Fund	15500.0	2024-02-10	17100.0	1	12	10.0	Equity hybrid	8
23	23	Gold	24000.0	2023-09-30	27200.0	2	24	9.0	Physical gold	8
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