D. Y. Patil College of College of Engineering and Technology, Kolhapur Department of Computer Science & Engineering

Class: SY-A Subject: AOOC

Experiment no: 15

Group No. G-13 Mini Project

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Title of Mini-Project:

Basic Expense Tracker Using Java Swing

Problem Statement:

Managing personal finances manually can be tedious and prone to errors. There is a need for a simple desktop-based expense tracker that allows users to record, manage, and visualize their income and expenditures in an organized way. The application should also allow users to edit previous entries and view their financial summary over time.

Introduction:

The **Basic Expense Tracker** is a GUI-based Java application developed using **Java Swing**. It allows users to input their monthly income and record individual expenses with details such as description, amount, date, and category. The program maintains a dynamic list of expenses and provides an interactive dashboard summarizing total income, total expenses, current balance, and monthly expense breakdown. Additionally, users can view and edit existing expenses from a dedicated panel. This project helps demonstrate GUI development, event handling, and basic object-oriented design in Java.

Module description or working of system:

1. Sidebar Panel:

- A vertical navigation menu with buttons to access:
 - Dashboard
 - Add/Edit Expense
 - View All Transactions

2. Dashboard Panel:

- Input field to enter/set monthly income.
- Displays:
 - Total income
 - Total expenses
 - Current balance
 - Month-wise summary of expenses

3. Add/Edit Expense Panel:

- Input fields for:
 - Description
 - Amount
 - Date (in DD/MM/YYYY format)
 - Category (dropdown: Food, Transport, Entertainment, Others)
- Save button to add new or update existing expense.
- Expense list (JList) for selecting and editing an existing entry.

4. View All Transactions Panel:

- Displays the complete transaction history.
- A refresh button updates the view after new data is entered.

5. Functional Flow:

- Application starts on the dashboard.
- User sets income \rightarrow adds expenses \rightarrow sees updated balance and stats.

- Expenses are editable from the Add/Edit screen using the list on the right.
- View All section shows all expenses in detail format.

Technologies Used:

- Programming Language: Java
- **GUI Framework**: Java Swing (AWT + Swing Components)
- **Development Tools**: Any Java IDE (e.g., IntelliJ, Eclipse, NetBeans)

System Architecture:

Java Swing Expense Tracker Flow Chart Frontend UI Sidebar User Closes Wait for User Action Navigation "Select Add/Edit Back to Select View All Back to Back to Select Dashboard Navigation Expense" Navigation **Transactions** Navigation ılı View All Wait for User Add or Edit Wait for User Transactions Wait for User Input **Dashboard Panel** Input Expense Panel Panel Input "Add/Edit Fetch Request Data Expense Transactions Return Selected Return All **Backend Logic** Expense Expenses Update or Select "Store/Retrieve Return Totals Expense Expense" Update and Expense Data Compute Totals Select Logic Provide Expense List Computation Logic

Screenshots:

