



# PERSONAL EXPENSE TRACKER

My Expense Tracker

WEEK OF

AMOUNT CC C

DESCRIPTION

DATE

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Submitted By: Vishal Mesta

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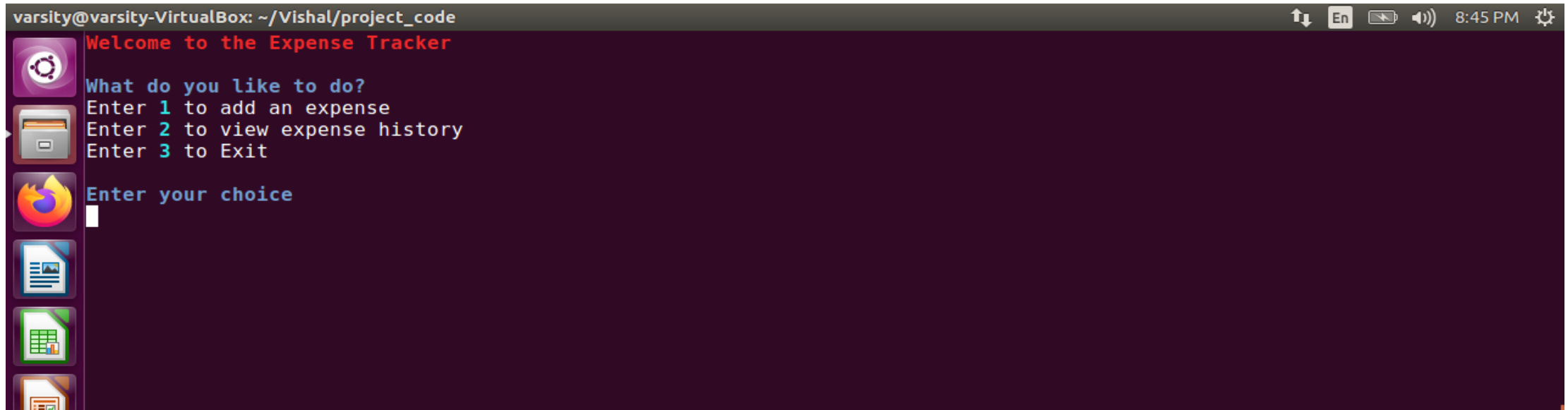
# ABSTRACT

The **Personal Expense Tracker** is a software application designed to simplify and streamline the process of managing daily expenses. It provides a user-friendly command-line interface (CLI) that allows users to record, track, and analyze expenditures across various categories. The program is implemented in C and organized into modular components for enhanced code maintainability. Users can easily add expenses, view detailed expense histories, and gain insights into their spending habits.

# PROGRAM FLOW

## Main Menu

- ❖ Display a welcome message.
- ❖ Present options to the user:
  - Add an expense.
  - View expense history.
  - Exit.



```
varsity@varsity-VirtualBox: ~/Vishal/project_code
Welcome to the Expense Tracker
What do you like to do?
Enter 1 to add an expense
Enter 2 to view expense history
Enter 3 to Exit
Enter your choice
█
```

The screenshot shows a terminal window with a dark purple background. The title bar at the top reads 'varsity@varsity-VirtualBox: ~/Vishal/project\_code'. On the left side, there is a vertical dock with icons for a terminal, a file manager, a web browser, and a spreadsheet. The terminal output shows the program's main menu: 'Welcome to the Expense Tracker' in red, followed by 'What do you like to do?' in blue. Below this, three options are listed: 'Enter 1 to add an expense', 'Enter 2 to view expense history', and 'Enter 3 to Exit'. The prompt 'Enter your choice' is shown in blue, followed by a white cursor character '█'. The top right of the window displays system icons for network, keyboard layout (En), battery, volume, and the time '8:45 PM'.

## Add an Expense

- ❖ User selects "Add an expense."
- ❖ Choose a category for the expense (housing, transport, groceries, etc.).

```
varsity@varsity-VirtualBox: ~/Vishal/project_code
Welcome to the Expense Tracker
What do you like to do?
Enter 1 to add an expense
Enter 2 to view expense history
Enter 3 to Exit
Enter your choice
1
Choose a category:
Enter 1 to select: Housing
Enter 2 to select: Transport
Enter 3 to select: Groceries
Enter 4 to select: Food
Enter 5 to select: Health
Enter 6 to select: Lifestyle
Enter 7 to select: Obligation
Enter 8 to select: Other
Enter your choice

```

❖ Enter the amount for the expense.

```
varsity@varsity-VirtualBox: ~/Vishal/project_code
Welcome to the Expense Tracker
What do you like to do?
Enter 1 to add an expense
Enter 2 to view expense history
Enter 3 to Exit
Enter your choice
1
Choose a category:
Enter 1 to select: Housing
Enter 2 to select: Transport
Enter 3 to select: Groceries
Enter 4 to select: Food
Enter 5 to select: Health
Enter 6 to select: Lifestyle
Enter 7 to select: Obligation
Enter 8 to select: Other
Enter your choice
2
Enter the amount
240
```

- ❖ Optionally add a description.
- ❖ Save the expense with the current date to the respective data file.

```
varsity@varsity-VirtualBox: ~/Vishal/project_code
Welcome to the Expense Tracker

What do you like to do?
Enter 1 to add an expense
Enter 2 to view expense history
Enter 3 to Exit

Enter your choice
1

Choose a category:
Enter 1 to select: Housing
Enter 2 to select: Transport
Enter 3 to select: Groceries
Enter 4 to select: Food
Enter 5 to select: Health
Enter 6 to select: Lifestyle
Enter 7 to select: Obligation
Enter 8 to select: Other

Enter your choice
2

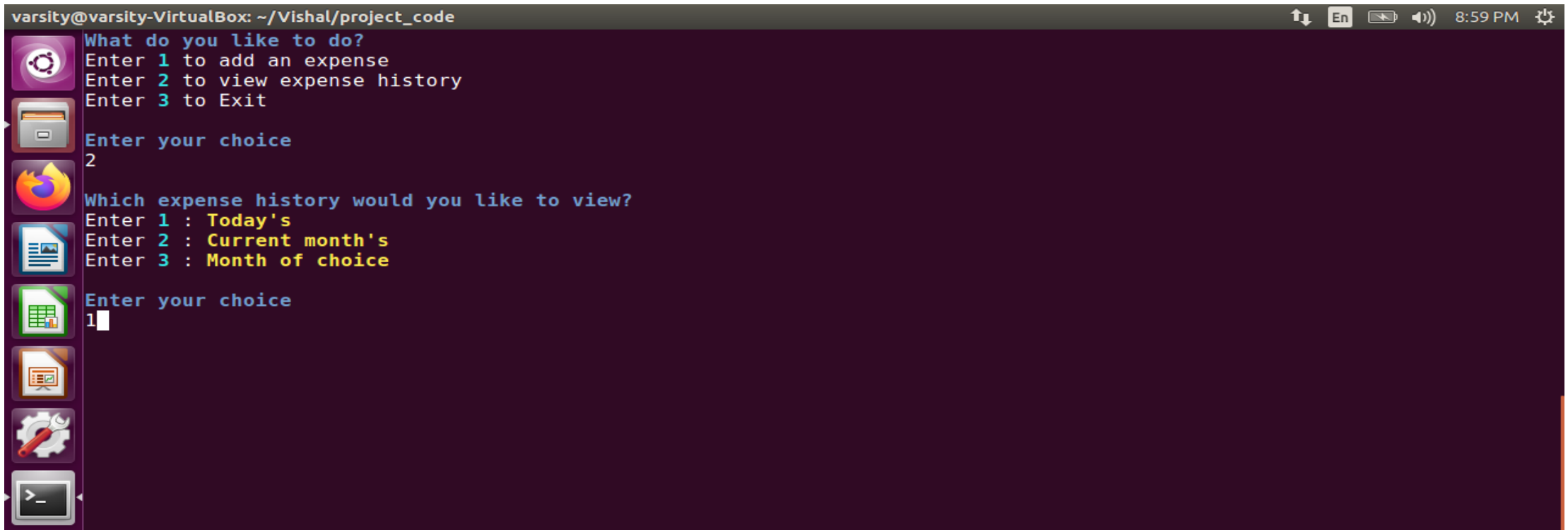
Enter the amount
240

Would you like to add description? Enter y to add or press any other key to ignore
y

Enter description
Auto Fare
```

## View Expense History

- ❖ User selects "View expense history."
- ❖ Choose whether to view:
  - today's expenses
  - current month's expenses
  - expenses for any specific month and year.



```
varsity@varsity-VirtualBox: ~/Vishal/project_code
What do you like to do?
Enter 1 to add an expense
Enter 2 to view expense history
Enter 3 to Exit
Enter your choice
2
Which expense history would you like to view?
Enter 1 : Today's
Enter 2 : Current month's
Enter 3 : Month of choice
Enter your choice
1
```

Based on the selection, the program:

- Displays detailed expense records, including category-wise spending and cumulative totals.

### Today's expenses

```
varsity@varsity-VirtualBox: ~/Vishal/project_code
What do you like to do?
Enter 1 to add an expense
Enter 2 to view expense history
Enter 3 to Exit
Enter your choice
2
Which expense history would you like to view?
Enter 1 : Today's
Enter 2 : Current month's
Enter 3 : Month of choice
Enter your choice
1
DATE : 13-9-2023


|       | HOUSING | TRANSPORT | GROCERIES | FOOD | HEALTH | LIFESTYLE | OBLIGATION | OTHER | REMARK    |
|-------|---------|-----------|-----------|------|--------|-----------|------------|-------|-----------|
|       | 0.00    | 240.00    | 0.00      | 0.00 | 0.00   | 0.00      | 0.00       | 0.00  | Auto Fare |
| TOTAL | 0.00    | 240.00    | 0.00      | 0.00 | 0.00   | 0.00      | 0.00       | 0.00  |           |


CUMMULATIVE TOTAL : 240.00
Press x key to exit to main menu
x
```



- Calculate cumulative totals for each category and overall total expenses.

## Current month's expenses

```
varsity@varsity-VirtualBox: ~/Vishal/project_code
What do you like to do?
Enter 1 to add an expense
Enter 2 to view expense history
Enter 3 to Exit
Enter your choice
2
Which expense history would you like to view?
Enter 1 : Today's
Enter 2 : Current month's
Enter 3 : Month of choice
Enter your choice
2
```

```
varsity@varsity-VirtualBox: ~/Vishal/project_code
```

DATE	HOUSING	TRANSPORT	GROCERIES	FOOD	HEALTH	LIFESTYLE	OBLIGATION	OTHER	TOTAL
9-9-2023	30500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30500.00
10-9-2023	0.00	0.00	0.00	650.00	0.00	0.00	0.00	50.00	700.00
11-9-2023	0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00	40.00
12-9-2023	0.00	50.00	0.00	30.00	0.00	0.00	0.00	0.00	80.00
13-9-2023	0.00	240.00	0.00	0.00	0.00	0.00	0.00	0.00	240.00
TOTAL	30500.00	290.00	0.00	720.00	0.00	0.00	0.00	50.00	31560.00

```

CUMMULATIVE TOTAL OF SEP 2023 : 31560.00
Do you wish to view details of expenditure of any particular day of the month?
Press y for YES or any other key for NO
y
Enter valid day
11
```

- Presents an option to view details of expenditure of any particular day of the month.

varsity@varsity-VirtualBox: ~/Vishal/project\_code 9:01 PM

DATE	HOUSING	TRANSPORT	GROCERIES	FOOD	HEALTH	LIFESTYLE	OBLIGATION	OTHER	TOTAL
9-9-2023	30500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30500.00
10-9-2023	0.00	0.00	0.00	650.00	0.00	0.00	0.00	50.00	700.00
11-9-2023	0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00	40.00
12-9-2023	0.00	50.00	0.00	30.00	0.00	0.00	0.00	0.00	80.00
13-9-2023	0.00	240.00	0.00	0.00	0.00	0.00	0.00	0.00	240.00
<b>TOTAL</b>	<b>30500.00</b>	<b>290.00</b>	<b>0.00</b>	<b>720.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>50.00</b>	<b>31560.00</b>

**CUMMULATIVE TOTAL OF SEP 2023 : 31560.00**

Do you wish to view details of expenditure of any particular day of the month?  
Press y for YES or any other key for NO

y

Enter valid day  
11

**DATE : 11-9-2023**

HOUSING	TRANSPORT	GROCERIES	FOOD	HEALTH	LIFESTYLE	OBLIGATION	OTHER	REMARK
0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00	Biscuits
<b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>	<b>40.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	

**CUMMULATIVE TOTAL : 40.00**

Do you wish to view details of expenditure of any other day of the month?  
Press y for YES or any other key for NO

## Expenses of any month of choice

```
varsity@varsity-VirtualBox: ~/Vishal/project_code
What do you like to do?
Enter 1 to add an expense
Enter 2 to view expense history
Enter 3 to Exit
Enter your choice
2
Which expense history would you like to view?
Enter 1 : Today's
Enter 2 : Current month's
Enter 3 : Month of choice
Enter your choice
3
```

```
varsity@varsity-VirtualBox: ~/Vishal/project_code
Record of following months for Year : 2023 are available
Sep_2023.txt
Enter name of the month in the format month year ( e.g. 1 2023 for Jan 2023 ) to view expenses
1 2023
Sorry...No records found
Press x key to exit to main menu
x
```

varsity@varsity-VirtualBox: ~/Vishal/project\_code

9:05 PM

Record of following months for Year : 2023 are available  
Sep\_2023.txt

Enter name of the month in the format month year ( e.g. 1 2023 for Jan 2023 ) to view expenses

9 2023

varsity@varsity-VirtualBox: ~/Vishal/project\_code

9:06 PM

DATE	HOUSING	TRANSPORT	GROCERIES	FOOD	HEALTH	LIFESTYLE	OBLIGATION	OTHER	TOTAL
9-9-2023	30500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30500.00
10-9-2023	0.00	0.00	0.00	650.00	0.00	0.00	0.00	50.00	700.00
11-9-2023	0.00	0.00	0.00	40.00	0.00	0.00	0.00	0.00	40.00
12-9-2023	0.00	50.00	0.00	30.00	0.00	0.00	0.00	0.00	80.00
13-9-2023	0.00	240.00	0.00	0.00	0.00	0.00	0.00	0.00	240.00
TOTAL	30500.00	290.00	0.00	720.00	0.00	0.00	0.00	50.00	31560.00

CUMMULATIVE TOTAL OF SEP 2023 : 31560.00

Do you wish to view details of expenditure of any particular day of the month?  
Press y for YES or any other key for NO

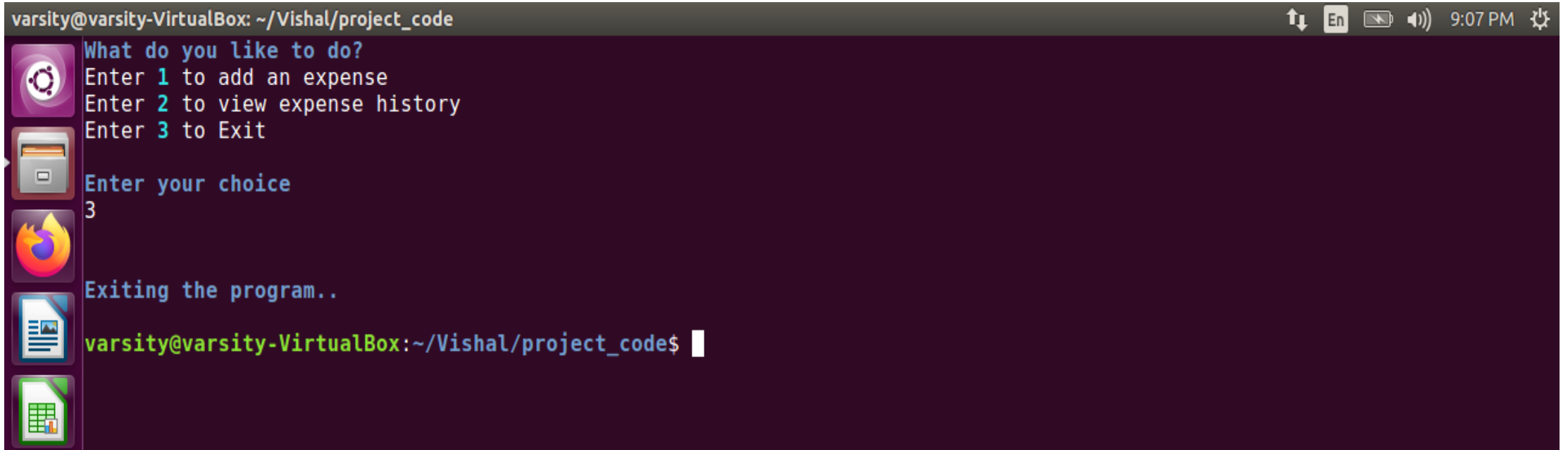
n

Press x key to exit to main menu

x

## Exit

❖ The user selects "Exit" and the program terminates

A terminal window titled 'varsity@varsity-VirtualBox: ~/Vishal/project\_code' with a dark purple background. The window has a top bar with system icons and a time display of 9:07 PM. On the left side, there is a vertical dock with icons for a terminal, a file manager, a web browser, a document, and a spreadsheet. The terminal text shows a menu with three options: '1 to add an expense', '2 to view expense history', and '3 to Exit'. The user has entered '3', and the program responds with 'Exiting the program..' followed by a new command prompt.

```
varsity@varsity-VirtualBox: ~/Vishal/project_code
What do you like to do?
Enter 1 to add an expense
Enter 2 to view expense history
Enter 3 to Exit
Enter your choice
3
Exiting the program..
varsity@varsity-VirtualBox:~/Vishal/project_codes$
```

# PROGRAM STRUCTURE

The program comprises six files:

➤ expense\_header.h   
expense\_header.h

❖ **Purpose:** This header file defines essential data structures and function prototypes used throughout the program.

❖ **Key Features:**

- Defines structures for storing dates and expense categories.
- Prototypes for functions like add\_expense, expense\_history, and utilities for date manipulation.
- Ensures proper organization and maintainability of the codebase.

## ➤ expense\_main.c expense\_main.c

❖ **Purpose:** The main program file responsible for user interaction and control flow.

### ❖ **Key Features:**

- Presents a user-friendly menu allowing users to add expenses, view expense history, or exit the program.
- Utilizes the functions defined in expense\_header.h for expense management.
- Calls functions like `add\_expense()` and `expense\_history()` based on user choices.
- Offers a clear and straightforward command-line interface for user convenience.

## ➤ file\_generation.c

file\_generation.c

❖ **Purpose:** This file contains utility functions crucial for generating file names and managing date-related operations.

### ❖ Key Features:

- **`void today( date \*current )`:** Obtains the current date and stores it in the `current` structure.
- **`int days\_month( date any\_date , char \*which\_month )`:** Calculates the number of days in a given month and stores the month's name and year in the `which\_month` string.
- **`char \*name( date current\_date )`:** Given a date, this function generates a file name based on the month and year.



## ➤ Expense\_history.c expense\_history.c

❖ **Purpose:** This file provides functions to display expense history.

### ❖ **Key Features:**

- **`void today\_expense( void )`:** Displays today's expenses.
- **`void any\_month( void )`:** Allows the user to select a specific month and year to view expenses.
- **`void current\_month( void )`:** Displays the expenses for the current month.
- **`void expense\_history( void )`:** The main function for viewing expense history, allowing the user to choose between different options.

➤ expense\_write\_data.c   
expense\_data\_write.c

❖ **Purpose:** Manages the addition of new expense records.

❖ **Key Features:**

- **`void add\_expense( void )`:** Allows the user to add a new expense entry, including selecting a category, entering the amount, and adding an optional description.

## ➤ expense\_read\_data.c expense\_data\_read.c

❖ **Purpose:** Handles reading and displaying expense data.

### ❖ **Key Features:**

- **`void any\_date\_detail( date current\_date , FILE \*fp )`:** Displays details of expenses for a specific date from a file.
- **`void month\_expense( date temp\_date , FILE \*fp )`:** Displays the monthly expenses, including category-wise details and totals.
- **`category any\_date( char \*current\_date , FILE \*fp )`:** Retrieves and returns the expenses for a specific date from a file.

# CONCLUSION

The Expense Tracker Program is a useful tool for managing and tracking daily expenses. It offers a simple and effective way to record and review expenses over different timeframes. The program's modular structure and well-defined functions make it easy to maintain and expand in the future.

# FUTURE ENHANCEMENTS

- Implementing features to edit and delete expense records, offering greater control over expense management.
- Exploring data visualization options to provide users with graphical representations of their expense data, aiding in more in-depth analysis.
- Considering the introduction of user accounts to enable personalized expense tracking and reporting.
- Adding the ability to export expense data to various formats for further analysis or external use.