**Budget Tracker App**

**Objective:**

The objective of this project is to develop a simple and interactive command-line-based Budget Tracker App using Python. The application allows users to manage their personal finances by tracking their income and expenses, categorizing them, and displaying their financial summary in real-time.

**Key Functionalities:**

* Add Transaction: Users can enter transactions marked as either Income or Expense. Each entry includes: amount, category (e.g., Rent, Food), and an optional note.
* View Transactions: Displays a list of all added transactions with serial numbers and details.
* View Balance: Calculates and displays the total income, total expenses, and the net balance.
* User-Friendly Menu: Clear and simple text-based interface with navigation choices for actions.
* Code Structure Breakdown
* Data Model:

transactions = []

* Add Transaction Function:

def add\_transaction():  
 t\_type = input("Enter transaction type (Income/Expense): ").strip().lower()  
 ...

* View Transactions:

def view\_transactions():  
 for i, t in enumerate(transactions, 1):  
 print(...)

* Balance Calculation:

income = sum(t['amount'] for t in transactions if t['type'] == 'income')  
expense = sum(t['amount'] for t in transactions if t['type'] == 'expense')

* Main Menu Loop:

while True:  
 print("1. Add Transaction\n2. View Transactions\n3. View Balance\n4. Exit")

**Sample Console Output:**

💰 Welcome to the Budget Tracker App 💰  
  
Choose an option:  
1. Add Transaction  
2. View Transactions  
3. View Balance  
4. Exit  
Enter your choice (1-4): 1  
  
Enter transaction type (Income/Expense): income  
Enter amount: ₹ 6000  
Enter category (e.g., Food, Rent, Salary): Salary  
Enter a short note (optional): August salary  
✅ Transaction added successfully!

**Learning Outcomes:**

* Python fundamentals (functions, loops, conditionals)
* Use of data structures like dictionaries and lists
* Handling and validating user input
* Modular programming and reusability
* Real-time application logic (income/expense calculator)

**Possible Enhancements / Future Scope:**

* Data Persistence: Save transactions in a JSON/CSV file or SQLite database
* Graphs & Reports: Use matplotlib or pandas to show monthly spending trends
* User Login: Multi-user support with authentication
* GUI Integration: Add graphical interface using Tkinter or PyQt
* Web Dashboard: Use Flask/Django for a cloud-based budget tracker
* Export Options: Export data to Excel, PDF, or email

**Conclusion:**

The Budget Tracker App using Python is a practical and effective personal finance tool for beginners. It allows users to monitor spending habits, record earnings, and calculate their available balance. This project not only demonstrates basic programming concepts but also builds the foundation for full-fledged finance apps.