

**A**  
**PROJECT REPORT**  
**ON**  
**“ PERSONAL FINANCE TRACKER ”**

SUBMITTED BY:

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SUBJECT:

**C++ PROGRAMMING**

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# INTRODUCTION

In today's fast-paced world, managing personal finances effectively is crucial for achieving financial stability and independence. The Personal Finance Tracker System is a mini project developed in C++ designed to help users monitor their income, expenses, savings, and investments in a user-friendly manner.

This system aims to simplify financial management by providing functionalities to record transactions, categorize expenses, generate reports, and visualize spending patterns. By leveraging a robust C++ framework, the application ensures efficiency and reliability while offering an interactive interface for users to gain insights into their financial health.

**The project's primary objectives include:**

- 1. Income and Expense Tracking :-** Users can easily input and categorize their financial transactions.
- 2. Budget Management :-** The system helps users set and manage budgets for various categories.
- 3. Reporting :-** Generate comprehensive reports that summarize financial activity over specified periods.
- 4. Data Persistence :-** Store user data securely to ensure continuity and easy access.

By implementing this system, users can take control of their finances, make informed decisions, and work towards their financial goals. This project not only serves as a practical tool but also as an educational experience in software development, data management, and user interface design.

## CODE

```
#include <iostream>
```

```
#include <vector>
```

```
#include <string>
```

```
#include <iomanip>
```

```
Using namespace std;
```

```
Struct Transaction {
```

```
    String category;
```

```
    Double amount;
```

```
    Bool isExpense; // true for expense, false for  
income
```

```
};
```

**Class FinanceTracker {**

**Private:**

**Vector<Transaction> transactions;**

**Public:**

**Void addIncome(const string& category,  
double amount) {**

**Transactions.push\_back({category,  
amount, false});  
}**

**Void addExpense(const string& category,  
double amount) {**

**Transactions.push\_back({category,  
amount, true});  
}**

```
Void viewSummary() {  
    Double totalIncome = 0.0;  
    Double totalExpense = 0.0;  
  
    Cout << fixed << setprecision(2);  
    Cout << "Summary of Transactions:\n";  
    For (const auto& transaction :  
transactions) {  
        If (transaction.isExpense) {  
            totalExpense += transaction.amount;  
  
            cout << "Expense: " <<  
transaction.category << " - $" <<  
transaction.amount << "\n";  
        } else {  
            totalIncome += transaction.amount;  
  
            cout << "Income: " <<  
transaction.category << " - $" <<  
transaction.amount << "\n";  
        }  
    }  
}
```

```
    }  
}
```

```
    Cout << "Total Income: $" << totalIncome  
<< "\n";
```

```
    Cout << "Total Expenses: $" <<  
totalExpense << "\n";
```

```
    Cout << "Net Income: $" << (totalIncome –  
totalExpense) << "\n";
```

```
    }  
};
```

```
Int main() {
```

```
    FinanceTracker tracker;
```

```
    Int choice;
```

```
    Do {
```

```
Cout << "\nPersonal Finance Tracker\n";  
Cout << "1. Add Income\n";  
Cout << "2. Add Expense\n";  
Cout << "3. View Summary\n";  
Cout << "4. Exit\n";  
Cout << "Choose an option: ";  
Cin >> choice;
```

```
String category;  
Double amount;
```

```
Switch (choice) {
```

```
    Case 1:
```

```
        Cout << "Enter income category: ";  
        Cin >> category;  
        Cout << "Enter amount: ";  
        Cin >> amount;
```



```
Tracker.addIncome(category,  
amount);
```

```
Break;
```

**Case 2:**

```
Cout << "Enter expense category: ";
```

```
Cin >> category;
```

```
Cout << "Enter amount: ";
```

```
Cin >> amount;
```

```
Tracker.addExpense(category,  
amount);
```

```
Break;
```

**Case 3:**

```
Tracker.viewSummary();
```

```
Break;
```

**Case 4:**

```
Cout << "Exiting...\n";
```

```
Break;
```

**Default:**

**Cout << "Invalid option. Please try  
again.\n";**

**}**

**} while (choice != 4);**

**Return 0;**

**}**

---

# OUTPUT

## Personal Finance Tracker

1. Add Income
2. Add Expense
3. View Summary
4. Exit

Choose an option: 1

Enter income category: Salary

Enter amount: 3000

Personal Finance Tracker

1. Add Income
2. Add Expense
3. View Summary
4. Exit

Choose an option: 2

Enter expense category: Rent

Enter amount: 1200

Personal Finance Tracker

1. Add Income
2. Add Expense
3. View Summary
4. Exit

Choose an option: 2

Enter expense category: Groceries

Enter amount: 300

Personal Finance Tracker

- 
1. Add Income
  2. Add Expense
  3. View Summary
  4. Exit

Choose an option: 3

Summary of Transactions:

Income: Salary - \$3000.00

Expense: Rent - \$1200.00

Expense: Groceries - \$300.00

Total Income: \$3000.00

Total Expenses: \$1500.00

Net Income: \$1500.00

Personal Finance Tracker

1. Add Income
2. Add Expense
3. View Summary
4. Exit

Choose an option: 4

Exiting...

---

# CONCLUSION

In conclusion, the Personal Finance Tracker project successfully demonstrates the application of C++ in developing a user-friendly tool for managing personal finances. Through features such as expense tracking, budget management, and financial reporting, users can gain valuable insights into their spending habits and make informed financial decisions.

The project highlights the importance of efficient data handling and user interface design, utilizing object-oriented programming principles to create a scalable and maintainable application. Future improvements could include enhanced security measures, integration with online banking APIs, and a mobile-friendly version to further broaden accessibility. Overall, this project serves as a foundational step towards more sophisticated financial management solutions.