PROJECT SUMBISSION

MEMBERS

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CODE:

```
#include <iostream>
using namespace std;

void inputData(double &balance, double &annualTaxRate, int &months);
void processTransactions(int months, double balance, double annualTaxRate);
double getValidatedAmount(string message);

int main()
{
   int months;
   double annualTaxRate;
   double balance;

   inputData(balance, annualTaxRate, months);
   processTransactions(months, balance, annualTaxRate);

   return 0;
}

void inputData(double &balance, double &annualTaxRate, int &months)
{
   cout << "Enter initial balance: ";
   cin >> balance;

   cout << "Enter annual tax rate (%): ";
   cin >> annualTaxRate;

   cout << "Enter total number of months: ";
   cin >> months;
```

```
}

void processTransactions(int months, double balance, double annualTaxRate)
{
   double deposits[months];
   double withdrawals[months];
   double taxes[months];

   double totalDeposit = 0;
   double totalWithdrawal = 0;
   double totalTax = 0;

   double monthlyTaxRate = annualTaxRate / 12 / 100;

   for (int i = 0; i < months; i++)
   {
      cout << "\nMonth " << i + 1 << endl;

      deposits[i] = getValidatedAmount("Enter deposit amount: ");
      balance += deposits[i];
      totalDeposit += deposits[i];

      withdrawals[i] = getValidatedAmount("Enter withdrawal amount: ");
      balance -= withdrawals[i];
      totalWithdrawal += withdrawals[i];

      taxes[i] = balance * monthlyTaxRate;
      balance -= taxes[i];
      totalTax += taxes[i];
   }
   cout<<endl;
   cout << " Account Summary " << endl;
   cout << "Final Balance: " << balance << endl;
   cout << "Total Deposited: " << totalDeposit << endl;
   cout << "Total Withdrawn: " << totalWithdrawal << endl;
   cout << "Total Tax Deducted: " << totalTax << endl;
}

double getValidatedAmount(string message)
{
   double amount;
```

```
    do
    {
        cout << message;
        cin >> amount;
    } while (amount < 0);

    return amount;
}
```

PF project.cpp

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```cpp
#include <iostream>
using namespace std;

void inputData(double &balance, double &annualTaxRate, int &months);
void processTransactions(int months, double balance, double annualTaxRate);
double getValidatedAmount(string message);

int main()
{
    int months;
    double annualTaxRate;
    double balance;

    inputData(balance, annualTaxRate, months);
    processTransactions(months, balance, annualTaxRate);

    return 0;
}

void inputData(double &balance, double &annualTaxRate, int &months)
{
    cout << "Enter initial balance: ";
    cin >> balance;

    cout << "Enter annual tax rate (%): ";
    cin >> annualTaxRate;

    cout << "Enter total number of months: ";
    cin >> months;
}

void processTransactions(int months, double balance, double annualTaxRate)
{
    double deposits[months];
    double withdrawals[months];
    double taxes[months];

```

PF project.cpp

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```cpp
void processTransactions(int months, double balance, double annualTaxRate)
    double taxes[months];

    double totalDeposit = 0;
    double totalWithdrawal = 0;
    double totalTax = 0;

    double monthlyTaxRate = annualTaxRate / 12 / 100;

    for (int i = 0; i < months; i++)
    {
        cout << "\nMonth " << i + 1 << endl;

        deposits[i] = getValidatedAmount("Enter deposit amount: ");
        balance += deposits[i];
        totalDeposit += deposits[i];

        withdrawals[i] = getValidatedAmount("Enter withdrawal amount: ");
        balance -= withdrawals[i];
        totalWithdrawal += withdrawals[i];

        taxes[i] = balance * monthlyTaxRate;
        balance -= taxes[i];
        totalTax += taxes[i];
    }
    cout<<endl;
    cout << " Account Summary " << endl;
    cout << "Final Balance: " << balance << endl;
    cout << "Total Deposited: " << totalDeposit << endl;
    cout << "Total Withdrawn: " << totalWithdrawal << endl;
    cout << "Total Tax Deducted: " << totalTax << endl;
}

double getValidatedAmount(string message)
{
    double amount;
    do
```

```
60      cout<<endl;
61      cout << " Account Summary " << endl;
62      cout << "Final Balance: " << balance << endl;
63      cout << "Total Deposited: " << totalDeposit << endl;
64      cout << "Total Withdrawn: " << totalWithdrawal << endl;
65      cout << "Total Tax Deducted: " << totalTax << endl;
66  }
67
68  double getValidatedAmount(string message)
69  {
70      double amount;
71      do
72      {
73          cout << message;
74          cin >> amount;
75      } while (amount < 0);
76
77      return amount;
78  }
```

RESULT:

Output

```
Enter initial balance: 70000
Enter annual tax rate (%): 9
Enter total number of months: 3

Month 1
Enter deposit amount: 8000
Enter withdrawal amount: 4569

Month 2
Enter deposit amount: 7000
Enter withdrawal amount: 7000

Month 3
Enter deposit amount: 6521
Enter withdrawal amount: 0

 Account Summary
Final Balance: 78263.3
Total Deposited: 21521
Total Withdrawn: 11569
Total Tax Deducted: 1688.74


=== Code Execution Successful ===
```

Git Hub Link:

https://github.com/2540047-sudo/Saving-Account-Management-System.git