

Sample Run 1:

```
int main()
{
    Account account1( 600.0 ); // create Account object
    SavingsAccount account2( 150.0, .055 ); // create SavingsAccount object
    CheckingAccount account3( 450.0, 1.25 ); // create CheckingAccount object

    cout << fixed << setprecision( 2 );

    // display initial balance of each object
    cout << "account1 balance: $" << account1.getBalance() << endl;
    cout << "account2 balance: $" << account2.getBalance() << endl;
    cout << "account3 balance: $" << account3.getBalance() << endl;

    cout << "\nAttempting to debit $20.00 from account1." << endl;
    account1.debit( 20.0 );
    cout << "\nAttempting to debit $15.00 from account2." << endl;
    account2.debit( 15.0 );
    cout << "\nAttempting to debit $50.00 from account3." << endl;
    account3.debit( 50.0 );

    // display balances
    cout << "\naccount1 balance: $" << account1.getBalance() << endl;
    cout << "account2 balance: $" << account2.getBalance() << endl;
    cout << "account3 balance: $" << account3.getBalance() << endl;

    cout << "\nCrediting $30.00 to account1." << endl;
    account1.credit( 30.0 );
    cout << "\nCrediting $25.00 to account2." << endl;
    account2.credit( 25.0 );
    cout << "\nCrediting $40.00 to account3." << endl;
    account3.credit( 40.0 );

    // display balances
    cout << "\naccount1 balance: $" << account1.getBalance() << endl;
    cout << "account2 balance: $" << account2.getBalance() << endl;
    cout << "account3 balance: $" << account3.getBalance() << endl;

    // add interest to SavingsAccount object account2
    double interestEarned = account2.calculateInterest();
    cout << "\nAdding $" << interestEarned << " interest to account2."
        << endl;
    account2.credit( interestEarned );
}
```

~/Documents/College/Courses/DVC Summer 2024/COMSC 200/PA11 git:



./account_app

account1 balance: \$600.00

account2 balance: \$150.00

account3 balance: \$450.00

Attempting to debit \$20.00 from account1.

Attempting to debit \$15.00 from account2.

Attempting to debit \$50.00 from account3.

account1 balance: \$580.00

account2 balance: \$135.00

account3 balance: \$400.00

Crediting \$30.00 to account1.

Crediting \$25.00 to account2.

Crediting \$40.00 to account3.

account1 balance: \$610.00

account2 balance: \$160.00

account3 balance: \$440.00

Adding \$8.80 interest to account2.

New account2 balance: \$168.80

Sample Run 2:

```
int main()
{
    Account account1( 300.0 ); // create Account object
    SavingsAccount account2( 500.0, .025 ); // create SavingsAccount object
    CheckingAccount account3( 250.0, 1.5 ); // create CheckingAccount object

    cout << fixed << setprecision( 2 );

    // display initial balance of each object
    cout << "account1 balance: $" << account1.getBalance() << endl;
    cout << "account2 balance: $" << account2.getBalance() << endl;
    cout << "account3 balance: $" << account3.getBalance() << endl;

    cout << "\nAttempting to debit $10.00 from account1." << endl;
    account1.debit( 10.0 );
    cout << "\nAttempting to debit $50.00 from account2." << endl;
    account2.debit( 50.0 );
    cout << "\nAttempting to debit $20.00 from account3." << endl;
    account3.debit( 20.0 );

    // display balances
    cout << "\naccount1 balance: $" << account1.getBalance() << endl;
    cout << "account2 balance: $" << account2.getBalance() << endl;
    cout << "account3 balance: $" << account3.getBalance() << endl;

    cout << "\nCrediting $25.00 to account1." << endl;
    account1.credit( 25.0 );
    cout << "\nCrediting $40.00 to account2." << endl;
    account2.credit( 40.0 );
    cout << "\nCrediting $15.00 to account3." << endl;
    account3.credit( 15.0 );

    // display balances
    cout << "\naccount1 balance: $" << account1.getBalance() << endl;
    cout << "account2 balance: $" << account2.getBalance() << endl;
    cout << "account3 balance: $" << account3.getBalance() << endl;

    // add interest to SavingsAccount object account2
    double interestEarned = account2.calculateInterest();
    cout << "\nAdding $" << interestEarned << " interest to account2."
        << endl;
    account2.credit( interestEarned );

    cout << "\nNew account2 balance: $" << account2.getBalance() << endl;
```

~/Documents/College/Courses/DVC Summer 2024/COMSC 200/PA11 git:



./account_app

account1 balance: \$300.00

account2 balance: \$500.00

account3 balance: \$250.00

Attempting to debit \$10.00 from account1.

Attempting to debit \$50.00 from account2.

Attempting to debit \$20.00 from account3.

account1 balance: \$290.00

account2 balance: \$450.00

account3 balance: \$230.00

Crediting \$25.00 to account1.

Crediting \$40.00 to account2.

Crediting \$15.00 to account3.

account1 balance: \$315.00

account2 balance: \$490.00

account3 balance: \$245.00

Adding \$12.25 interest to account2.

New account2 balance: \$502.25

Sample Run 3:

```
int main()
{
    Account account1( 700.0 ); // create Account object
    SavingsAccount account2( 400.0, .04 ); // create SavingsAccount object
    CheckingAccount account3( 600.0, 1.75 ); // create CheckingAccount object

    cout << fixed << setprecision( 2 );

    // display initial balance of each object
    cout << "account1 balance: $" << account1.getBalance() << endl;
    cout << "account2 balance: $" << account2.getBalance() << endl;
    cout << "account3 balance: $" << account3.getBalance() << endl;

    cout << "\nAttempting to debit $35.00 from account1." << endl;
    account1.debit( 35.0 );
    cout << "\nAttempting to debit $20.00 from account2." << endl;
    account2.debit( 20.0 );
    cout << "\nAttempting to debit $60.00 from account3." << endl;
    account3.debit( 60.0 );

    // display balances
    cout << "\naccount1 balance: $" << account1.getBalance() << endl;
    cout << "account2 balance: $" << account2.getBalance() << endl;
    cout << "account3 balance: $" << account3.getBalance() << endl;

    cout << "\nCrediting $50.00 to account1." << endl;
    account1.credit( 50.0 );
    cout << "\nCrediting $30.00 to account2." << endl;
    account2.credit( 30.0 );
    cout << "\nCrediting $25.00 to account3." << endl;
    account3.credit( 25.0 );

    // display balances
    cout << "\naccount1 balance: $" << account1.getBalance() << endl;
    cout << "account2 balance: $" << account2.getBalance() << endl;
    cout << "account3 balance: $" << account3.getBalance() << endl;

    // add interest to SavingsAccount object account2
    double interestEarned = account2.calculateInterest();
    cout << "\nAdding $" << interestEarned << " interest to account2."
        << endl;
    account2.credit( interestEarned );

    cout << "\nNew account2 balance: $" << account2.getBalance() << endl;
```

~/Documents/College/Courses/DVC Summer 2024/COMSC 200/PA11 git:(main)±8 (0.238s)

./account_app

account1 balance: \$700.00

account2 balance: \$400.00

account3 balance: \$600.00

Attempting to debit \$35.00 from account1.

Attempting to debit \$20.00 from account2.

Attempting to debit \$60.00 from account3.

account1 balance: \$665.00

account2 balance: \$380.00

account3 balance: \$540.00

Crediting \$50.00 to account1.

Crediting \$30.00 to account2.

Crediting \$25.00 to account3.

account1 balance: \$715.00

account2 balance: \$410.00

account3 balance: \$565.00

Adding \$16.40 interest to account2.

New account2 balance: \$426.40

Sample Run 4:

```
int main()
{
    Account account1( 1000.0 ); // create Account object
    SavingsAccount account2( 200.0, .05 ); // create SavingsAccount object
    CheckingAccount account3( 300.0, 1.5 ); // create CheckingAccount object

    cout << fixed << setprecision( 2 );

    // display initial balance of each object
    cout << "account1 balance: $" << account1.getBalance() << endl;
    cout << "account2 balance: $" << account2.getBalance() << endl;
    cout << "account3 balance: $" << account3.getBalance() << endl;

    cout << "\nAttempting to debit $75.00 from account1." << endl;
    account1.debit( 75.0 );
    cout << "\nAttempting to debit $25.00 from account2." << endl;
    account2.debit( 25.0 );
    cout << "\nAttempting to debit $40.00 from account3." << endl;
    account3.debit( 40.0 );

    // display balances
    cout << "\naccount1 balance: $" << account1.getBalance() << endl;
    cout << "account2 balance: $" << account2.getBalance() << endl;
    cout << "account3 balance: $" << account3.getBalance() << endl;

    cout << "\nCrediting $60.00 to account1." << endl;
    account1.credit( 60.0 );
    cout << "\nCrediting $20.00 to account2." << endl;
    account2.credit( 20.0 );
    cout << "\nCrediting $30.00 to account3." << endl;
    account3.credit( 30.0 );

    // display balances
    cout << "\naccount1 balance: $" << account1.getBalance() << endl;
    cout << "account2 balance: $" << account2.getBalance() << endl;
    cout << "account3 balance: $" << account3.getBalance() << endl;

    // add interest to SavingsAccount object account2
    double interestEarned = account2.calculateInterest();
    cout << "\nAdding $" << interestEarned << " interest to account2."
        << endl;
    account2.credit( interestEarned );

    cout << "\nNew account2 balance: $" << account2.getBalance() << endl;
```

~/Documents/College/Courses/DVC Summer 2024/COMSC 200/PA11 git:



./account_app

account1 balance: \$1000.00
account2 balance: \$200.00
account3 balance: \$300.00

Attempting to debit \$75.00 from account1.

Attempting to debit \$25.00 from account2.

Attempting to debit \$40.00 from account3.

account1 balance: \$925.00
account2 balance: \$175.00
account3 balance: \$260.00

Crediting \$60.00 to account1.

Crediting \$20.00 to account2.

Crediting \$30.00 to account3.

account1 balance: \$985.00
account2 balance: \$195.00
account3 balance: \$290.00

Adding \$9.75 interest to account2.

New account2 balance: \$204.75

Sample Run 5:

```
int main()
{
    Account account1( 800.0 ); // create Account object
    SavingsAccount account2( 300.0, .06 ); // create SavingsAccount object
    CheckingAccount account3( 700.0, 2.0 ); // create CheckingAccount object

    cout << fixed << setprecision( 2 );

    // display initial balance of each object
    cout << "account1 balance: $" << account1.getBalance() << endl;
    cout << "account2 balance: $" << account2.getBalance() << endl;
    cout << "account3 balance: $" << account3.getBalance() << endl;

    cout << "\nAttempting to debit $45.00 from account1." << endl;
    account1.debit( 45.0 );
    cout << "\nAttempting to debit $35.00 from account2." << endl;
    account2.debit( 35.0 );
    cout << "\nAttempting to debit $70.00 from account3." << endl;
    account3.debit( 70.0 );

    // display balances
    cout << "\naccount1 balance: $" << account1.getBalance() << endl;
    cout << "account2 balance: $" << account2.getBalance() << endl;
    cout << "account3 balance: $" << account3.getBalance() << endl;

    cout << "\nCrediting $55.00 to account1." << endl;
    account1.credit( 55.0 );
    cout << "\nCrediting $50.00 to account2." << endl;
    account2.credit( 50.0 );
    cout << "\nCrediting $40.00 to account3." << endl;
    account3.credit( 40.0 );

    // display balances
    cout << "\naccount1 balance: $" << account1.getBalance() << endl;
    cout << "account2 balance: $" << account2.getBalance() << endl;
    cout << "account3 balance: $" << account3.getBalance() << endl;

    // add interest to SavingsAccount object account2
    double interestEarned = account2.calculateInterest();
    cout << "\nAdding $" << interestEarned << " interest to account2."
        << endl;
    account2.credit( interestEarned );

    cout << "\nNew account2 balance: $" << account2.getBalance() << endl;
```

~/Documents/College/Courses/DVC Summer 2024/COMSC 200/PA11 git:



./account_app

account1 balance: \$800.00

account2 balance: \$300.00

account3 balance: \$700.00

Attempting to debit \$45.00 from account1.

Attempting to debit \$35.00 from account2.

Attempting to debit \$70.00 from account3.

account1 balance: \$755.00

account2 balance: \$265.00

account3 balance: \$630.00

Crediting \$55.00 to account1.

Crediting \$50.00 to account2.

Crediting \$40.00 to account3.

account1 balance: \$810.00

account2 balance: \$315.00

account3 balance: \$670.00

Adding \$18.90 interest to account2.

New account2 balance: \$333.90