

Xcode File Edit View Find Navigate Editor Product Debug Integrate

week8 week8 My Mac

Finished running week8

week8 week8 C main transactions

```
1 Deposit: $200
2 Purchase - Daily necessities: $50.25
3 Purchase - Gas: $30
4 Final balance: $119.75
5 Deposit: $200
6 Purchase - Daily necessities: $50.25
7 Purchase - Gas: $30
8 Final balance: $119.75
9
```

Deposit amount: \$200
Purchased: Daily necessities, cost \$50.25
Purchased: Gas, cost \$30
Current balance: \$119.75
Program ended with exit code: 0

Line: 1 Col: 1

Xcode File Edit View Find Navigate Editor Product Debug Integrate

week8 week8 My Mac

Finished running week8

week8 week8 C main transactions

```
1 #include <iostream>
2 #include <fstream>
3 #include <string>
4
5 using namespace std;
6
7 // BankAccount class definition
8 class BankAccount {
9 private:
10     double balance; // To store account balance
11
12     // Save transaction to file
13     void saveTransaction(string type, double amount) {
14         ofstream file("transactions.txt", ios::app);
15         if (file.is_open()) {
16             file << type << ":" << amount << endl;
17             file.close();
18         }
19     }
20
21 public:
22     // Constructor to initialize balance to 0
23     BankAccount() {
24         balance = 0.0;
25     }
26
27     // Method to deposit money into the account
28     void deposit(double amount) {
29         balance += amount;
30     }
31 }
```

Deposit amount: \$200
Purchased: Daily necessities, cost \$50.25
Purchased: Gas, cost \$30
Current balance: \$119.75
Program ended with exit code: 0

Line: 1 Col: 1

The screenshot shows a C++ code editor with the following details:

- Project Structure:** week8 > week8 > C' main
- Code Content:**

```
class BankAccount {
    double balance;
public:
    // Method to deposit money into the account
    void deposit(double amount) {
        balance += amount;
        cout << "Deposit amount: $" << amount << endl;
        saveTransaction("Deposit", amount);
    }

    // Method to make a purchase and deduct from the balance
    void makePurchase(string item, double cost) {
        if (cost > balance) {
            cout << "Insufficient balance, unable to purchase: " << item << endl;
            saveTransaction("Failed purchase - " + item, cost);
        } else {
            balance -= cost;
            cout << "Purchased: " << item << ", cost $" << cost << endl;
            saveTransaction("Purchase - " + item, cost);
        }
    }

    // Method to display the current balance
    void displayBalance() {
        cout << "Current balance: $" << balance << endl;
        saveTransaction("Final balance", balance);
    }
};

// Main function
int main() {
    // Create a BankAccount object
}
```
- Output Window:**

```
Deposit amount: $200
Purchased: Daily necessities, cost $50.25
Purchased: Gas, cost $38
Current balance: $119.75
Program ended with exit code: 0
```
- Bottom Status Bar:** Line: 1 Col: 1

The screenshot shows the Xcode interface with a C++ project named "week8". The file "main.cpp" is open and contains the following code:

```
1 class BankAccount {
2     void makePurchase(string item, double cost) {
3         }
4     }
5     }
6     // Method to display the current balance
7     void displayBalance() {
8         cout << "Current balance: $" << balance << endl;
9         saveTransaction("Final balance", balance);
10    }
11 };
12
13 // Main Function
14 int main() {
15     // Create a BankAccount object
16     BankAccount myAccount;
17
18     // Add an initial deposit
19     myAccount.deposit(200.00);
20
21     // Make purchases
22     myAccount.makePurchase("Daily necessities", 50.25);
23     myAccount.makePurchase("Gas", 30.00);
24
25     // Display the final balance
26     myAccount.displayBalance();
27
28     return 0;
29 }
```

The output window shows the program's execution results:

```
Deposit amount: $200
Purchased: Daily necessities, cost $50.25
Purchased: Gas, cost $30
Current balance: $119.75
Program ended with exit code: 0
```