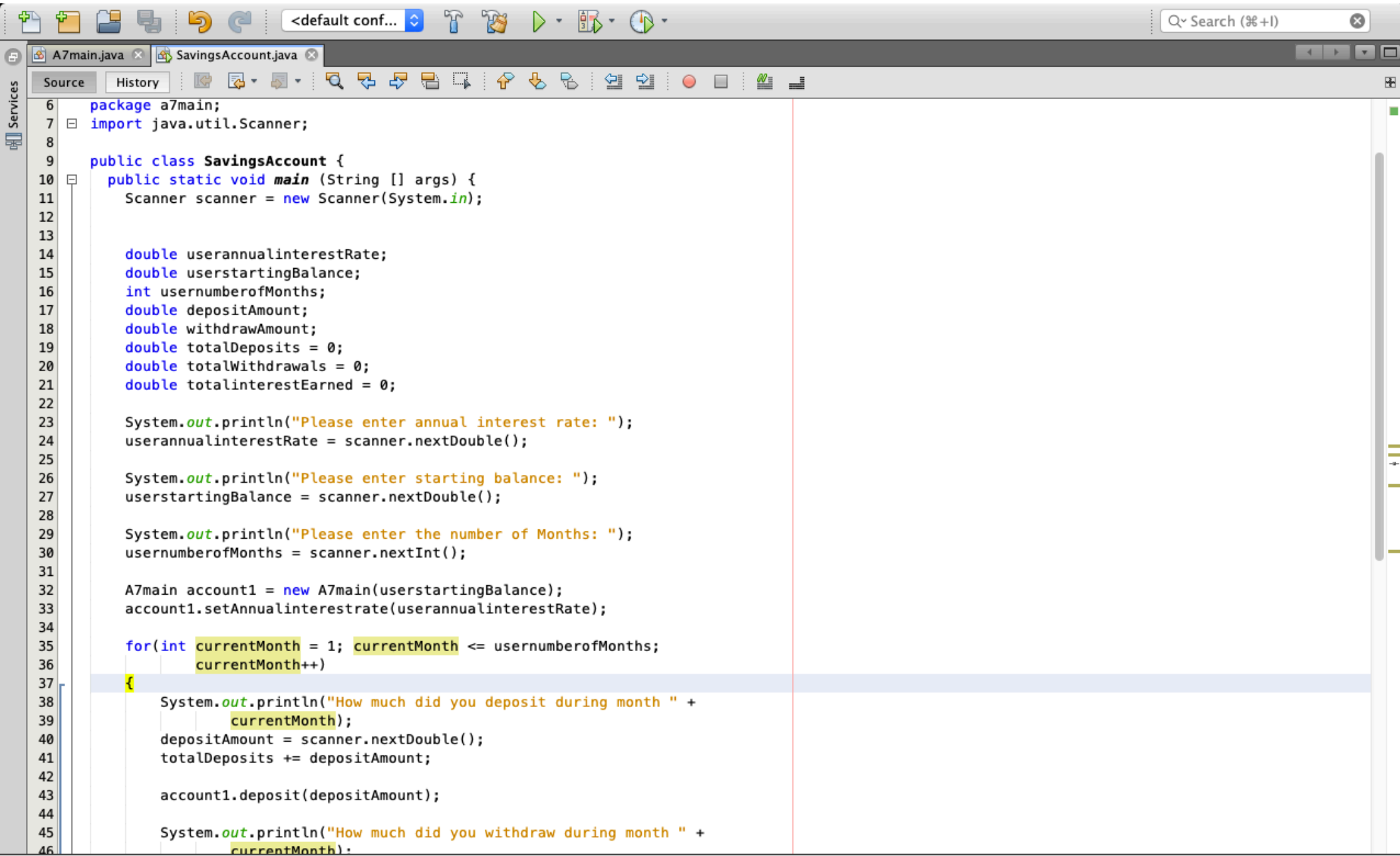


```
6 package a7main;
7
8 /**
9  *
10  * @author jonathangarcia
11  */
12 public class A7main {
13     private double annualInterestRate;
14     private double balance;
15     private double totalInterest = 0;
16
17     public void withdraw(double userAmount) {
18         balance -= userAmount;
19     }
20     public void deposit(double userAmount){
21         balance += userAmount;
22     }
23     public double getBalance() {
24         return balance;
25     }
26     public double addmonthlyInterest() {
27         double monthlyInterest = ((annualInterestRate / 12) * balance);
28         balance += monthlyInterest;
29         return monthlyInterest;
30     }
31 }
32 public void setAnnualinterestrate(double newRate){
33     annualInterestRate = newRate / 100;
34     annualInterestRate = newRate;
35 }
36 public A7main(double startingBalance){
37     balance = startingBalance;
38     annualInterestRate = 0;
39 }
40
41 }
42
```



```
6 package a7main;
7 import java.util.Scanner;
8
9 public class SavingsAccount {
10     public static void main (String [] args) {
11         Scanner scanner = new Scanner(System.in);
12
13
14         double userannualinterestRate;
15         double userstartingBalance;
16         int usernumberofMonths;
17         double depositAmount;
18         double withdrawAmount;
19         double totalDeposits = 0;
20         double totalWithdrawals = 0;
21         double totalInterestEarned = 0;
22
23         System.out.println("Please enter annual interest rate: ");
24         userannualinterestRate = scanner.nextDouble();
25
26         System.out.println("Please enter starting balance: ");
27         userstartingBalance = scanner.nextDouble();
28
29         System.out.println("Please enter the number of Months: ");
30         usernumberofMonths = scanner.nextInt();
31
32         A7main account1 = new A7main(userstartingBalance);
33         account1.setAnnualinterestRate(userannualinterestRate);
34
35         for(int currentMonth = 1; currentMonth <= usernumberofMonths;
36             currentMonth++)
37         {
38             System.out.println("How much did you deposit during month " +
39                 currentMonth);
40             depositAmount = scanner.nextDouble();
41             totalDeposits += depositAmount;
42
43             account1.deposit(depositAmount);
44
45             System.out.println("How much did you withdraw during month " +
46                 currentMonth);
```

IDE interface showing Java code for a savings account simulation. The code is in `SavingsAccount.java` and the output is in the `Output - a7main (run)` window.

```
38 System.out.println("How much did you deposit during month " +
39     currentMonth);
40 depositAmount = scanner.nextDouble();
41 totalDeposits += depositAmount;
42
43 account1.deposit(depositAmount);
44
45 System.out.println("How much did you withdraw during month " +
46     currentMonth);
47 withdrawAmount = scanner.nextDouble();
48 totalWithdrawals += withdrawAmount;
49
50 account1.withdraw(withdrawAmount);
51
52 totalInterestEarned += account1.addmonthlyInterest();
53 }
54 System.out.printf("The final balance at %d months will be $%,.2f\nThe total "
55     + "amount of deposits: $%,.2f\nThe total amount of Withdrawals: @%,.2"
56     + "f\nThe total interest earned: $%,.2f", usernumberofMonths,
57     account1.getBalance(), totalDeposits, totalWithdrawals,
58     totalInterestEarned);
59 }
```

Output - a7main (run)

```
How much did you deposit during month 1
100
How much did you withdraw during month 1
20
How much did you deposit during month 2
50
How much did you withdraw during month 2
12
How much did you deposit during month 3
60
How much did you withdraw during month 3
25
The final balance at 3 months will be $3,765.11
The total amount of deposits: $210.00
The total amount of Withdrawals: @57.00
The total interest earned: $,.22412.106481BUILD SUCCESSFUL (total time: 34 seconds)
```