

# Advanced Programming (Java) QAP1

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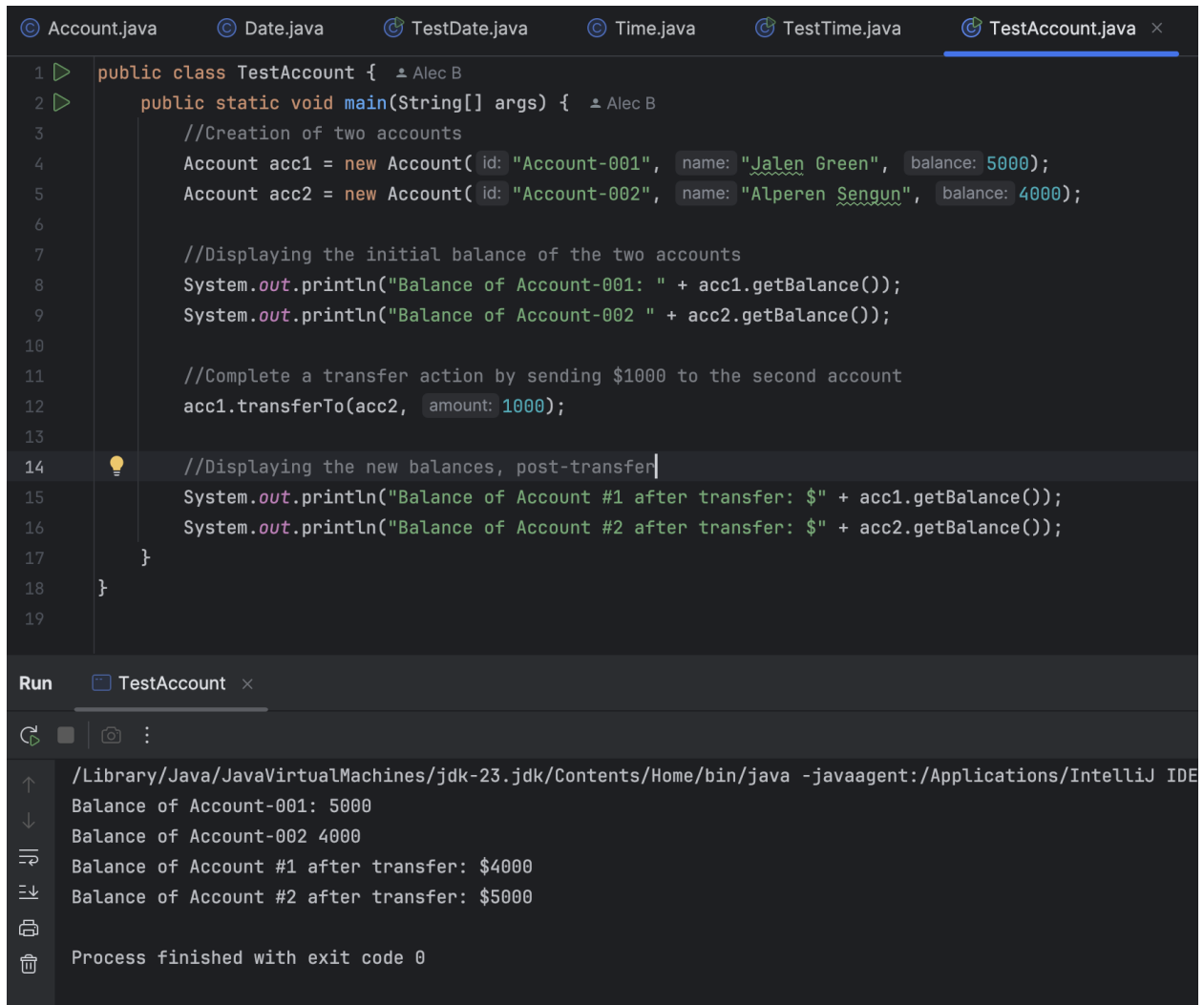
January 30<sup>th</sup>

SD12

## Questionnaire

1. This assignment took me approximately 6 hours total, if I were to guess. I needed to practice OOP in Java, and had to familiarize myself with IntelliJ
2. To complete this assignment, I utilized W3Schools, Ainee's lecture notes, and StackOverflow
3. N/A
4. N/A
5. I thought the first question was the most difficult, I had to think a little extra for the transfer method. The other two questions seemed to come somewhat naturally after doing practice questions.

## Problem 1 Screenshot

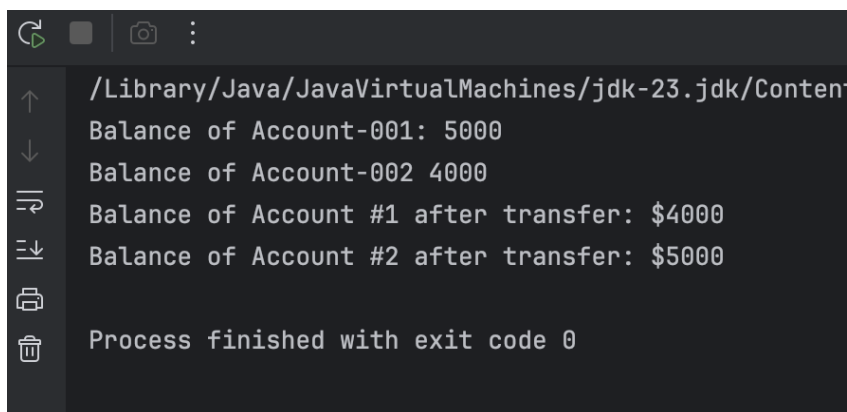


The screenshot shows an IDE with several tabs: Account.java, Date.java, TestDate.java, Time.java, TestTime.java, and TestAccount.java. The TestAccount.java tab is active, displaying the following code:

```
1 public class TestAccount {  // Alec B
2     public static void main(String[] args) {  // Alec B
3         //Creation of two accounts
4         Account acc1 = new Account( id: "Account-001", name: "Jalen Green", balance: 5000);
5         Account acc2 = new Account( id: "Account-002", name: "Alperen Sengun", balance: 4000);
6
7         //Displaying the initial balance of the two accounts
8         System.out.println("Balance of Account-001: " + acc1.getBalance());
9         System.out.println("Balance of Account-002 " + acc2.getBalance());
10
11         //Complete a transfer action by sending $1000 to the second account
12         acc1.transferTo(acc2, amount: 1000);
13
14         //Displaying the new balances, post-transfer
15         System.out.println("Balance of Account #1 after transfer: $" + acc1.getBalance());
16         System.out.println("Balance of Account #2 after transfer: $" + acc2.getBalance());
17     }
18 }
19 }
```

Below the code editor, the Run tab is visible, showing the execution output:

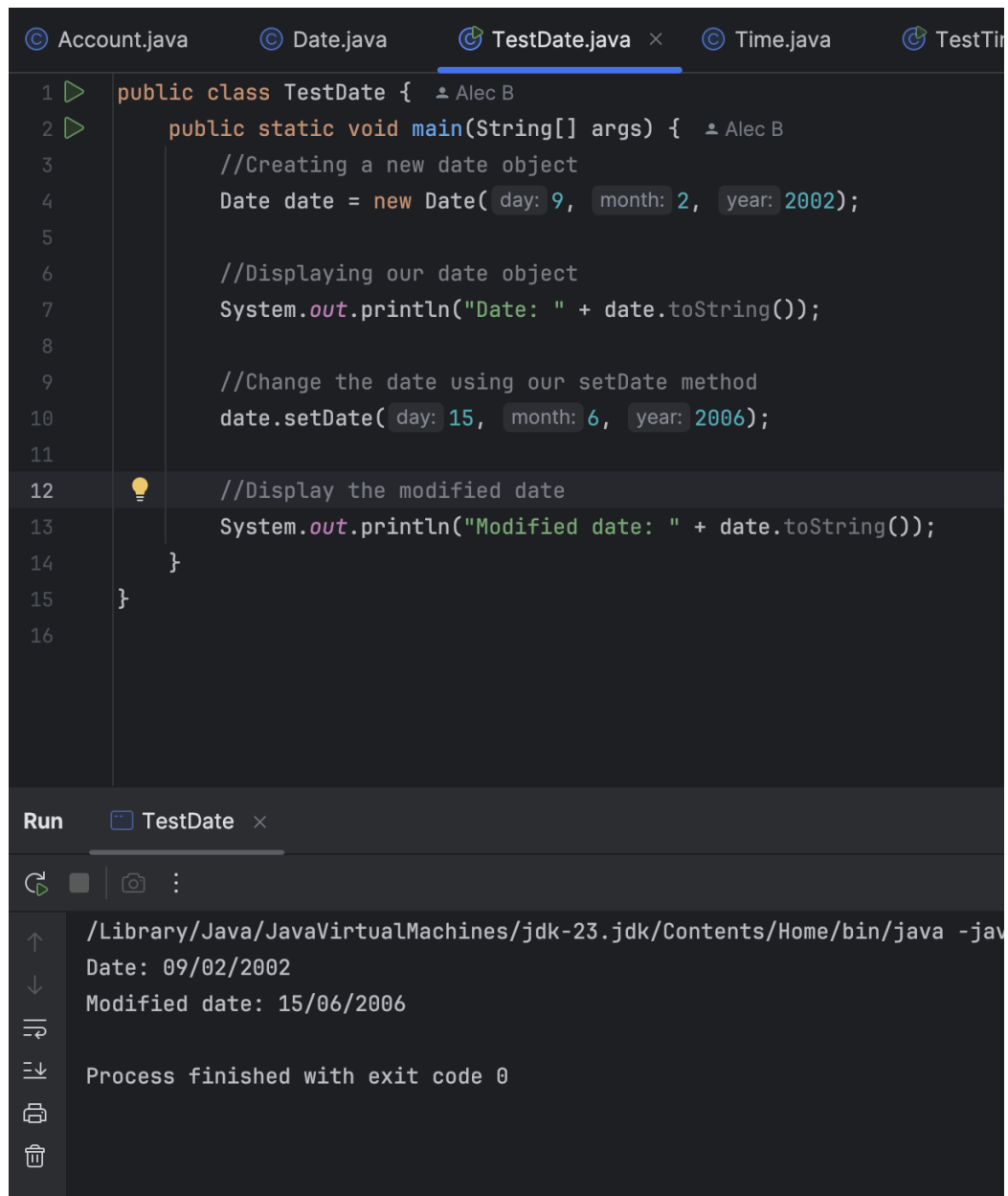
```
Run TestAccount x
/Library/Java/JavaVirtualMachines/jdk-23.jdk/Contents/Home/bin/java -javaagent:/Applications/IntelliJ IDE
Balance of Account-001: 5000
Balance of Account-002 4000
Balance of Account #1 after transfer: $4000
Balance of Account #2 after transfer: $5000
Process finished with exit code 0
```



The screenshot shows a terminal window with the following output:

```
/Library/Java/JavaVirtualMachines/jdk-23.jdk/Content
Balance of Account-001: 5000
Balance of Account-002 4000
Balance of Account #1 after transfer: $4000
Balance of Account #2 after transfer: $5000
Process finished with exit code 0
```

## Problem 2 Screenshot

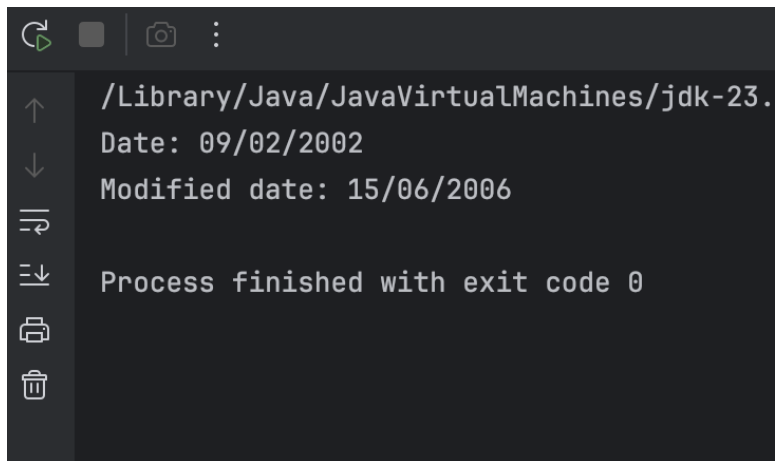


The screenshot shows an IDE with several tabs: Account.java, Date.java, TestDate.java (active), Time.java, and TestTir.java. The TestDate.java file contains the following code:

```
1 public class TestDate {
2     public static void main(String[] args) {
3         //Creating a new date object
4         Date date = new Date( day: 9, month: 2, year: 2002);
5
6         //Displaying our date object
7         System.out.println("Date: " + date.toString());
8
9         //Change the date using our setDate method
10        date.setDate( day: 15, month: 6, year: 2006);
11
12        //Display the modified date
13        System.out.println("Modified date: " + date.toString());
14    }
15 }
16 }
```

Below the code editor, the 'Run' tab is active, showing the execution output for TestDate. The output is as follows:

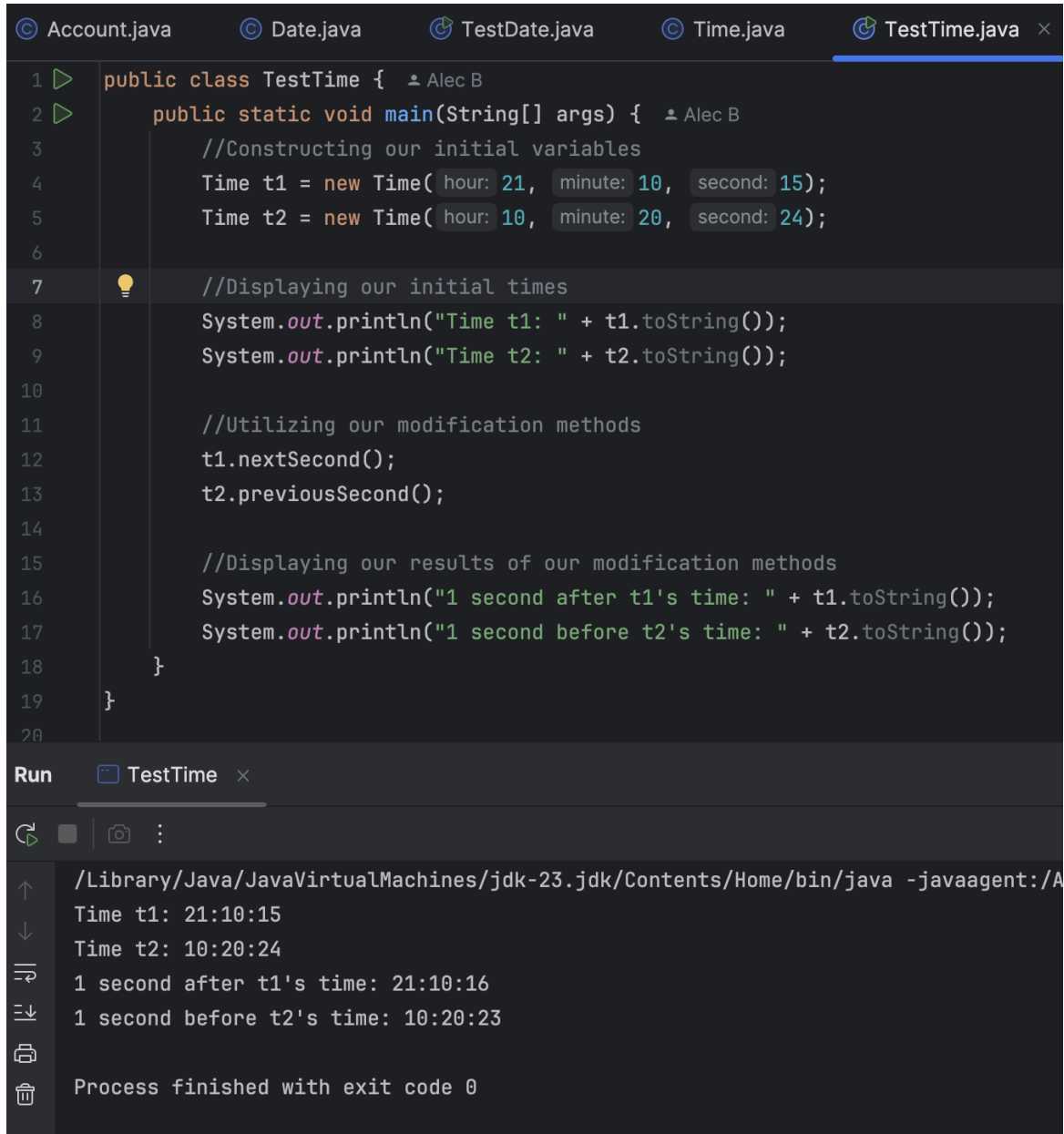
```
/Library/Java/JavaVirtualMachines/jdk-23.jdk/Contents/Home/bin/java -jav
Date: 09/02/2002
Modified date: 15/06/2006
Process finished with exit code 0
```



A terminal window with a dark background. The title bar shows a green play button icon, a grey square icon, a camera icon, and a vertical ellipsis icon. On the left side of the terminal, there is a vertical toolbar with icons for: up arrow, down arrow, refresh, expand/collapse, copy, and delete. The main area of the terminal displays the following text:

```
/Library/Java/JavaVirtualMachines/jdk-23.  
Date: 09/02/2002  
Modified date: 15/06/2006  
  
Process finished with exit code 0
```

## Problem 3 Screenshot

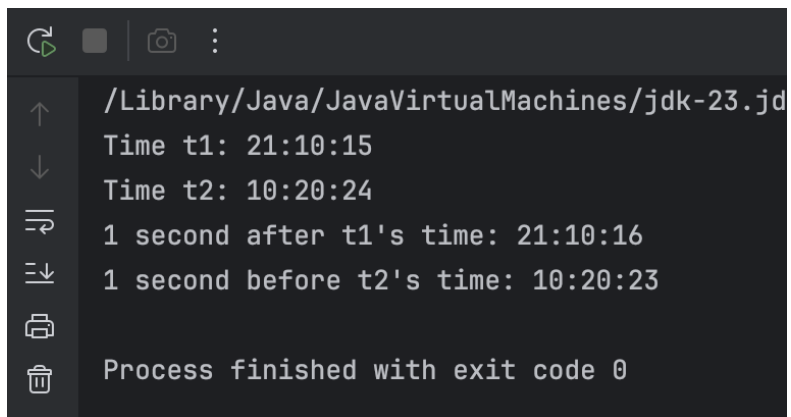


The screenshot displays an IDE with a dark theme. At the top, there are tabs for 'Account.java', 'Date.java', 'TestDate.java', 'Time.java', and 'TestTime.java'. The 'TestTime.java' tab is active, showing the following code:

```
1 public class TestTime {  Alec B
2     public static void main(String[] args) {  Alec B
3         //Constructing our initial variables
4         Time t1 = new Time( hour: 21, minute: 10, second: 15);
5         Time t2 = new Time( hour: 10, minute: 20, second: 24);
6
7         //Displaying our initial times
8         System.out.println("Time t1: " + t1.toString());
9         System.out.println("Time t2: " + t2.toString());
10
11        //Utilizing our modification methods
12        t1.nextSecond();
13        t2.previousSecond();
14
15        //Displaying our results of our modification methods
16        System.out.println("1 second after t1's time: " + t1.toString());
17        System.out.println("1 second before t2's time: " + t2.toString());
18    }
19 }
20 }
```

Below the code editor is a 'Run' section with a 'TestTime' tab. It shows the execution output:

```
/Library/Java/JavaVirtualMachines/jdk-23.jdk/Contents/Home/bin/java -javaagent:/A
Time t1: 21:10:15
Time t2: 10:20:24
1 second after t1's time: 21:10:16
1 second before t2's time: 10:20:23
Process finished with exit code 0
```



A terminal window with a dark background. The title bar at the top shows a green play button icon, a grey square icon, a camera icon, and a vertical ellipsis icon. On the left side of the terminal, there is a vertical toolbar with icons for: up arrow, down arrow, double left arrow, double right arrow, print, and trash. The main area of the terminal displays the following text:

```
/Library/Java/JavaVirtualMachines/jdk-23.jd  
Time t1: 21:10:15  
Time t2: 10:20:24  
1 second after t1's time: 21:10:16  
1 second before t2's time: 10:20:23  
  
Process finished with exit code 0
```