

Long Program 2: Account Modified

Description

Make the following modifications to your Program 8:

- Create multiple instances of account. The number of instances will be indicated by the first integer in each input file. Use an array of Account objects.
- Each command in the input file now has an index to an account. Perform the appropriate transaction on that account. (e.g. **d 0 100** means deposit \$100 into the account at index 0 in your array; **w 1 50** means withdraw \$50 from the account at index 1 in your array)
- Record each transaction (up to 5 per instance of account), and print out the account's history whenever the "p" command is read from the input file.
- Print a message with the account ID every time a new instance of Account is created (this should happen at the very beginning of your program)

Your SubmitJ printout should use all the sample data in my examples below. You should have at least 3 .dat files. You may have more than 3 (if you want to add your own test data), but not fewer than 3.

Sample Input/Output

```

~~~~~
~                               File: in1.dat                               ~
~~~~~

1
d 0 50
w 0 10
i 0
p 0

-----
-                               Execution                               -
-----

Account 9721 created
$50.00 deposited into account 9721
$10.00 withdrawn from account 9721
$0.20 interest added to account 9721

*****
* Transaction history for account 9721
* $50.00 deposited
* $10.00 withdrawn
* $0.20 earned in interest
* Current balance: $40.20
*****

```

```

~~~~~
~                               File: in2.dat                               ~
~~~~~

```

```
3
d 0 100
d 1 100
w 1 101
d 2 5
w 0 150
i 0
i 1
i 2
d 0 1000
w 0 1100.50
p 0
p 1
p 2
```

Execution

```
Account 8821 created
Account 6842 created
Account 7720 created
$100.00 deposited into account 8821
$100.00 deposited into account 6842
Error: cannot withdraw $101.00 from account 6842
$5.00 deposited into account 7720
Error: cannot withdraw $150.00 from account 8821
$0.50 interest added to account 8821
$0.50 interest added to account 6842
$0.02 interest added to account 7720
$1000.00 deposited into account 8821
$1100.50 withdrawn from account 8821
*****
* Transaction history for account 8821
* $100.00 deposited
* $0.50 earned in interest
* $1000.00 deposited
* $1100.50 withdrawn
* Current balance: $0.00
*****
```

```
*****
* Transaction history for account 6842
* $100.00 deposited
* $0.50 earned in interest
* Current balance: $100.50
*****
```

```
*****
* Transaction history for account 7720
* $5.00 deposited
* $0.02 earned in interest
* Current balance: $5.02
*****
```

```

~~~~~
~                               File: in2.dat                               ~
~~~~~

```

```

d 100
d 200
w 150
i
p
d 1000
p
w 1150.75
p

```

```

-----
-                               Execution                               -
-----

```

```

$100.00 deposited into account 8890
$200.00 deposited into account 8890
$150.00 withdrawn from account 8890
$0.75 interest added to account 8890
Current balance for account 8890: $150.75
$1000.00 deposited into account 8890
Current balance for account 8890: $1150.75
$1150.75 withdrawn from account 8890
Current balance for account 8890: $0.00

```

```

~~~~~
~                               File: in3.dat                               ~
~~~~~

```

```

4
d 1 100
w 0 5
w 1 5
p 1
d 2 100
d 3 100
i 1
i 2
p 0
p 1
p 2
p 3

```

```

-----
-                               Execution                               -
-----

```

```

Account 2354 created
Account 7932 created
Account 8077 created
Account 2205 created
$100.00 deposited into account 7932
Error: cannot withdraw $5.00 from account 2354
$5.00 withdrawn from account 7932

```

```

*****
* Transaction history for account 7932
* $100.00 deposited
* $5.00 withdrawn
* Current balance: $95.00
*****
$100.00 deposited into account 8077
$100.00 deposited into account 2205
$0.47 interest added to account 7932
$0.50 interest added to account 8077

```

```

*****
* Transaction history for account 2354
* Current balance: $0.00
*****

```

```

*****
* Transaction history for account 7932
* $100.00 deposited
* $5.00 withdrawn
* $0.47 earned in interest
* Current balance: $95.48
*****

```

```

*****
* Transaction history for account 8077
* $100.00 deposited
* $0.50 earned in interest
* Current balance: $100.50
*****

```

```
*****
* Transaction history for account 2205
* $100.00 deposited
* Current balance: $100.00
*****
```

Documentation

Include the following comments at the top of your source code:

```
// *****  
// Name: YOUR NAME  
// Course: CS116  
// Professor: Steven Krieg  
// Semester: Winter 2017  
// Assignment: Long Program 2  
// Description: ENTER YOUR BRIEF DESCRIPTION  
// *****
```

What to Submit

1. On Canvas: LProg2.java and Account.java (your source code)
2. In class: SubmitJ printout, using all my sample data files

Grading

Point Value	Description
70	Program works correctly (compiles, executes, employs effective logic, and produces the correct output)
20	Program is well-written (descriptive comments, proper indentation, appropriate variable names, consistent style)

Total: 90 points