Program Assignment 2 with Multithreading

OODP 2020

One Week Given

Due Date: May 16th, Saturday, 10 pm

Deliverables

- Source codes - **.java files** only

Do **not include Eclipse directory**.

Remove "**package PackageName**;" statement in the source when you submit.

- User's manual including **running shots** of your program;
- **Design** Document with **UML** or your own notations;
- Submit all your deliverables with **one zip file**;
- Include **your name** into the zip file.

Simulating Storing and Retrieving some cache with the same account for a number of family members...

The initial balance is given as input. Max. is $100.
The number of family members is given as an input.
Maximum number is six.

Maximum deposit per family member is $50.
Maximum withdrawal per family member is $80.
Total number of deposits and withdrawals is 20~40, which should show all the behavior of output;

Initial Balance: 50
The number of **family members**: 4
initial balance is $50
family member 2 storing   +$10
          New balance: $60
family member 2: retrieving   -$19
          New balance: $41
family member 3 storing   +$36
          New balance: $77
family member 1: retrieving   -$25
          New balance: $52
family member 3 storing   +$45
          New balance: $97

family member 1: retrieving   -$72
          New balance: $25
family member 3 storing   +$25
          New balance: $50
family member 4: retrieving   -$43
          New balance: $7
family member 1 storing   +$30
          New balance: $37
family member 1: trying to retrieve $78
Not allowed, balance is not sufficient!
Total Saved: $146 **Total Spent**: $159
Current balance: $37

family member 2 storing	+$21
New balance:	$58
family member 3: retrieving	-$20
New balance:	$38
family member 2 storing	+$32
New balance:	$70
family member 1: retrieving	-$11
New balance:	$59
family member 4 storing	+$20
New balance:	$79
family member 3: retrieving	-$10
New balance:	$69
family member 4 storing	+$18
New balance:	$87

family member 1: retrieving	-$25
New balance:	$62
family member 3 storing	+$45
New balance:	$107
family member 2: retrieving	-$68
New balance:	$39
family member 1 storing	+$9
New balance:	$48
family member 1: trying to retrieve $78	
Not allowed, balance is not sufficient!	
Total Saved: $291 **Total Spent**: $293	
Current balance:	$48
family member 1 storing	+$8
New balance:	$56
family member 2: trying to retrieve $62	
Not allowed, balance is **not sufficient!**	
Total Saved: $299 **Total Spent**: $293	
Current balance:	$56

Initial Balance: 100
The **number** of family members: 4
initial balance is $100
family member 3 storing   +$17
      New balance: $117
family member 2: retrieving   -$77
      New balance: $40
family member 1 storing   +$38
      New balance: $78
family member 2: retrieving   -$71
      New balance: $7
family member 2 storing   +$19
      New balance: $26
family member 1: trying to retrieve $28
Not allowed, balance is not sufficient!
Total Saved: $74 **Total Spent:** $148
Current balance: $26

family member 3 storing   +$19
      New balance: $45
family member 2: retrieving   -$20
      New balance: $25
family member 1 storing   +$29
      New balance: $54
family member 4: trying to retrieve $68
Not allowed, balance is not sufficient!
Total Saved: $122 Total Spent: $168
Current balance: $54

family member 3 storing	+$47
New balance:	$101
family member 4: retrieving	-$37
New balance:	$64
family member 4 storing	+$9
New balance:	$73
family member 3: retrieving	-$8
New balance:	$65
family member 3 storing	+$10
New balance:	$75
family member 4: retrieving	-$31
New balance:	$44

family member 3 storing	+$37
New balance:	$81
family member 3: retrieving	-$31
New balance:	$50
family member 4 storing	+$20
New balance:	$70
family member 1: retrieving	-$51
New balance:	$19
family member 2 storing	+$1
New balance:	$20
family member 3: retrieving	-$19
New balance:	$1
family member 3 storing	+$17
New balance:	$18
family member 3: trying to retrieve $26	
Not allowed, balance is not sufficient!	
Total Saved: $263 Total Spent: $345	
Current balance:	$18

Initial Balance: 10
The number of **family members: 2**
initial balance is $10
family member 1 storing   +$2
          New balance: $12
family member 2: trying to retrieve $15
Not allowed, **balance is not sufficient!**
Total Saved: $2 Total Spent: $0
Current balance: $12
family member 2 storing   +$20
          New balance: $32
family member 2: retrieving   -$24
          New balance: $8
family member 2 storing   +$6
          New balance: $14
family member 2: trying to retrieve $17
Not allowed, balance is not sufficient!
Total Saved: $28 Total Spent: $24

family member 2 storing   +$30
          New balance: $44
family member 2: retrieving   -$18
          New balance: $26
family member 1 storing   +$33
          New balance: $59
family member 1: retrieving   -$46
          New balance: $13
family member 2 storing   +$41
          New balance: $54
family member 1: retrieving   -$1
          New balance: $53
family member 1 storing   +$28
          New balance: $81
family member 2: retrieving   -$24
          New balance: $57
family member 2 storing   +$42
          New balance: $99

family member 1 storing   +$15
     New balance: $102
family member 1: retrieving   -$63
     New balance: $39
family member 2 storing   +$45
     New balance: $84
family member 1: retrieving   -$69
     New balance: $15
family member 1 storing   +$17
     New balance: $32
family member 1: trying to retrieve $77
Not allowed, balance is not sufficient!
Total Saved: $279 Total Spent: $257
Current balance: $32
family member 2 storing   +$20
     New balance: $52
family member 2: retrieving   -$34
     New balance: $18