A1 Sum of integers within a range

Input	Processing	Output
S1: option (-all, -even, - odd) [String] S3: start [int] end [int]	01. sum <- 0 02. **IF** (option = "-all" **THEN** 03. ((end - start)+1)/2*(start + end) 04. sum += 1 05. **ELSE IF** (option ="-even") **THEN** 06. **FOR** (int i = start; i <= end; i++) **DO** 07. **IF** (i % 2 == 0) **THEN** 08. sum += i 09. **ENDIF** 10. **ELSE IF** (option = "-odd") **THEN** 11. **FOR** (int i = start; i <= end; i++) **DO** 12. **IF** (i % 2 !0) **THEN** 13. sum += i 14. **ENDIF** 15. **END IF** **16.** **return** sum	sum [int]

D1

```
C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java SumIntRangeTester.java

Testing the 'sumIntRange.all' function...
21
TEST PASSED
13
TEST PASSED
234
TEST PASSED
7
TEST PASSED

Testing the 'sumIntRange.even' function...
12
TEST PASSED
6
TEST PASSED
126
TEST PASSED
0
TEST PASSED

Testing the 'sumIntRange.odd' function...
9
TEST PASSED
7
TEST PASSED
108
TEST PASSED
7
TEST PASSED

Done Testing...
```

D2

```
C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java SumIntRange.java -all 1 6
21

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java SumIntRange.java -all 6 7
13

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java SumIntRange.java -all 12 24
234

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java SumIntRange.java -all 7 7
7

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java SumIntRange.java -even 1 6
12

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java SumIntRange.java -even 6 7
6

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java SumIntRange.java -even 12 24
126

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java SumIntRange.java -even 7 7
0
```

[redacted]

```
C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java SumIntRange.java -odd 1 6
9

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java SumIntRange.java -odd 6 7
7

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java SumIntRange.java -odd 12 24
108

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java SumIntRange.java -odd 7 7
7
```

A1 Stacking Bricks

Input	Processing	Output
sideOne [int] sideTwo [int] sideThree [int] amount [int]	01. smallestSide <- 0 02. largestSide <- 0 03. 04. **IF** sideOne == sideTwo || sideOne == sideThree THEN 05. largestSide = sideOne 06. **ELSE IF** sideTwo == sideThree 07. largestSide = sideTwo 08. **ELSE IF** sideOne < sideTwo and sideOne < sideThree **THEN** 09. smallestSide <- sideOne 10. **ELSE IF** sideTwo < sideOne and sideTwo < sideThree 11. smallestSide <- sideTwo 12. **ELSE** 13. smallestSide <- sideThree 14. **ENDIF** 15. 16. **IF** sideOne > sideTwo and sideOne > side Three **THEN** 17. largestSide <- sideOne 18. **ELSE IF** sideTwo > SideOne and sideTwo > sideThree 19. largestSide <- sideTwo 20. **ELSE** 21. largestSide <- sideThree 22. **ENDIF** 23. 24. forUser <- “Min Height:”, smallestSide * amount “Max Height:”, largestSide * amount 25. 26. **return** forUser	forUser [String]

D1

```
C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricksTester.java

Testing the 'StackBricks.minimumStackHeight' function...
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED

Testing the 'StackBricks.maximumStackHeight' function...
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED

Testing the 'StackBricks.getOutput' function...
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED

Done Testing...
```

D2

minimumHeight( )

```
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C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 1 2 3 3
Min Height: 3, Max Height: 9

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 6 1 2 3
Min Height: 3, Max Height: 18

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 8 5 1 3
Min Height: 3, Max Height: 24

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 8 3 2 1
Min Height: 2, Max Height: 8

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 3 3 3 3
Min Height: 9, Max Height: 9

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 4 2 3 4
Min Height: 8, Max Height: 16

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 1 4 5 6
Min Height: 6, Max Height: 30

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 1 2 3 3
Min Height: 3, Max Height: 9
```

[redacted]

```
C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 1 2 0 8
Min Height: 0, Max Height: 16

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 1 0 3 45
Min Height: 0, Max Height: 135

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 0 2 3 4
Min Height: 0, Max Height: 12

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 1 2 3 0
Min Height: 0, Max Height: 0
```

maximumHeight( )

```
C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 6 2 3 3
Min Height: 6, Max Height: 18

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 6 9 2 3
Min Height: 6, Max Height: 27

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 8 5 10 3
Min Height: 15, Max Height: 30

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 10 10 10 2
Min Height: 20, Max Height: 20

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 3 3 3 3
Min Height: 9, Max Height: 9

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 4 2 3 4
Min Height: 8, Max Height: 16

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 1 4 5 6
Min Height: 6, Max Height: 30

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 5 5 1 5
Min Height: 5, Max Height: 25

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 1 5 5 5
Min Height: 5, Max Height: 25

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 5 0 5 5
Min Height: 0, Max Height: 25

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 0 0 0 4
Min Height: 0, Max Height: 0

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 1 2 3 0
Min Height: 0, Max Height: 0
```

getOutput( )

```
C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 6 2 3 3
Min Height: 6, Max Height: 18

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 8 5 10 3
Min Height: 15, Max Height: 30

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 6 9 2 3
Min Height: 6, Max Height: 27

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 10 10 10 2
Min Height: 20, Max Height: 20

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 3 3 3 3
Min Height: 9, Max Height: 9

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 4 2 3 4
Min Height: 8, Max Height: 16

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 1 4 5 6
Min Height: 6, Max Height: 30

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 5 5 1 5
Min Height: 5, Max Height: 25

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 1 5 5 5
Min Height: 5, Max Height: 25

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 5 0 5 5
Min Height: 0, Max Height: 25

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 0 0 0 4
Min Height: 0, Max Height: 0

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java StackBricks.java 1 2 3 0
Min Height: 0, Max Height: 0
```

A1 Filling Tanks

Input	Processing	Output
length [int] width [int] height [int] waterFilled [int]	01. toUser <- “” 02. 03. 04. tankVolume <- length * width * height 05. 06. **IF** waterFilled = tankVolume **THEN** 07. toUser <- “Tank Filled” 08. **ELSE IF** waterFilled <= tankVolume 09. toUser = (tankVolume - waterFilled) / (length * width) 10. toUser = “Vacant Height of” vacantHeight 11. **ELSE** 12. overflow = waterFilled - tankVolume 13. toUser “Overflow of” overflow 14. **return** toUser	toUser [String]

D1

```
C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java FillTankTester.java

Testing the 'Tank Filled'...
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED

Done Testing...
```

D2

```
C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java FillTank.java 3 4 5 60
Tank Filled

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java FillTank.java 3 3 3 27
Tank Filled

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java FillTank.java 1 1 1 1
Tank Filled

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java FillTank.java 2 2 2 8
Tank Filled

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java FillTank.java 3 4 5 54
Vacant Height of 0.50

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java FillTank.java 3 3 3 20
Vacant Height of 0.78

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java FillTank.java 1 2 3 4
Vacant Height of 1.00

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java FillTank.java 4 4 4 4
Vacant Height of 3.75

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java FillTank.java 3 3 3 29
Overflow of 2

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java FillTank.java 1 2 3 60
Overflow of 54

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java FillTank.java 10 10 10 8000
Overflow of 7000

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java FillTank.java 131 41 51 300000
Overflow of 26079
```

(Bonus) A1 Median Integer

Input	Processing	Output
int1 [int] int2 [int] int3 [int]	01. medianNum <- 0 02. 03. **IF** int1 = int2 OR int1 = int3 **THEN** 04. medianNum <- int1 05. **ELSE IF** int2 = int3 06. medianNum <- int 2 07. **ELSE IF** int1 > int2 and int1 < int3 OR (int1 < int2 and int1 > int3 **THEN** 08. medianNum = int1 09. **ELSE IF** int2 > int1 and int2 < int3) OR (int2 < int1 and int2 > int3 10. medianNum = int2 11. **ELSE** 12. medianNum = int3 13. 14. **return** medianNum	medianNum [int]

D1

```
C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianIntegerTester.java

Testing the 'median' function...
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
TEST PASSED
```

D2

```
C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianInteger.java 1 1 1
1

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianInteger.java 2 1 3
2

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianInteger.java 3 5 8
5

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianInteger.java 2 9 6
6

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianInteger.java 0 0 0
0

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianInteger.java 9 9 1
9

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianInteger.java 2 3 3
3

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianInteger.java 88 5 88
88

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianInteger.java 22 22 2
22

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianInteger.java 11 21 2
21

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianInteger.java 100 100
100

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianInteger.java 0 0 0
0

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianInteger.java 12 0 0
0

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianInteger.java 0 0 2
0

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianInteger.java 5 0 0
0

C:\Users\Gloud\Documents\Cam'ron Programming Assignment\Reviewed>java MedianInteger.java 2 4 6
4
```