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Intro to CS: Java

UNI: cs3544

**Review Exercises**

**R7.6**

*i* goes through all indices

1 + 2 + 3 + 4 + 5 + 4 + 3 + 2 + 1 + 0 = 25

total = 25

1. *i* goes through indices 0, 2, 4, 6, 8

total = 1 + 3 + 5 + 3 + 1 = 13

1. *i* goes through indices 1, 3, 5, 7, 9

total = 2 + 4 + 4 + 2 + 0 = 12

*i* goes through indices 2, 3, 4, 5, 6, 7, 8, 9, and 10

Because index 10 is beyond the index size of the array, this throws an ArrayIndexOutoBounds Exception.

*i* goes through indices 1, 2, 4, 8

total = 2 + 3 + 5 + 1 = 11

All indices

total = 25

*i* = 9, 7, 5, 3, 1

total = 0 + 2 + 4 + 4 + 2 = 12

All indices

total = -1

**R7.13**

for ( int elem : values )

{

total += elem;

}

int currentSize = 0;

for ( int elem : values )

{

if (currentSize > 0)

{

total += elem;

}

currentSize++;

}

for ( int elem : values )

{

if ( elem == target ) {

return i;

}

}

**R7.23**

Initialize int variable named size to 1;

Initialize int variable named max to 0;

For each index of the array, from index 1 to the index of the array length - 1 (basic for loop) {

if the value of the current array index == the value of the (current – 1) index of the array

{

increment size by 1;

if size is greater than max, then set max = size

}

else

{

set size = 1;

}

}

// the final value of max at the completion of this for loop, will represent the computed

// length of the longest run in the array

**R7.32**

1. True
2. False
3. False
4. False
5. False
6. True
7. True

**R7.33**

**int** i = 0;

**boolean** congruentArrayl = **true**;

**while** (i < arrayList1.size() && congruentArrayl) {

**if** (arrayList1.get(i) != arrayList2.get(i)) {

congruentArrayl = **false**;

}

i++;

}

System.***out***.println("The statement that these two array lists "

+ "are congruent, is: " + congruentArrayl);

}

ArrayList<String> copiedArrayList = **new** ArrayList<String>(arrayList1);

//OR

**for** (**int** it = 0; it < arrayList1.size(); it++ ) {

copiedArrayList.add(arrayList1.get(it));

}

**for** (**int** it = 0; it < arrayListInt.size(); it++) {

arrayListInt.set(it, 0);

}

**int** it = 0;

**int** size = arrayList.size();

**while** (it < size) {

arrayList.remove(0);

it++;

}