Task list

1)

main.java

imports multiple\_number\_input\_requests.java and number\_repeat\_counter.java

Prepares an integer array.

initializes classes number\_repeat\_counter as number\_count

and initlizes multiple\_number\_input\_requests as array\_loading

multiple\_number\_input\_requests.java

The load\_array method starts with an input array length request. Then it creates an integer array of requested size. While the user input is not == zero && the input count doesn’t exceed the requested input size it will continue to take in inputs.

A get\_array method was made to output this array to main.java

main.java

load\_array method is called

get\_array is loaded into input array

number\_repeat\_counter.java

The number\_repeat\_count method is going to load the first value of the array for the first count of the for loop since nothing should be true for the if statements. In the register called this.number\_value\_previous.

The second count of the for loops compares this.number\_value\_previous to this.number\_value\_current which had the second array value loaded. If they are the same the this.number\_repeat\_count register is incremented. also the current value is stored in this.number\_repeat\_value.

If the this.number\_repeat\_count is == to the this.number\_repeat\_count\_max the index count is stores as the this.max\_count\_start\_index.

if the current value is not == to the previous value the count is reset to zero. The repeat count is pushed to number repeat count max.

if the repeat count is greater than the repeat count max it stores the repeat count in this.repeat\_value\_max and the repeat count index is stored in this.count\_end\_index

I might have some excessive code

the current array value is stored as this.number\_value\_previous.

I made getters for all the useful outputs.

main.java

I printed out all the useful information via getters.

2)

space complexity

The # of registers used is 8 + the size of the given array.

time complexity

The time of computation is O (n)

Since there are a lot of if statements I think the

worst case: is if the list has an incrementing sequence of values.

22 333 4444 for instance. then the full algorithm would have to run.

best case: is if the largest sequence of numbers came first.

333 22 1 for instance. The some of the if statements will not have to run.

average case: hard to predict

3) Graphical user interface, text

Description automatically generated

4)

testing tactics

1) I either commented out areas of problematic code to isolate it

2) I incerted print statements

to read the values in the register

as they changed.

In this program

I had issues when the if statements

activated when I wanted them or not.

and compiled.

5a)

this if statement pushes the max count number value to be stored in this number\_repeat\_value\_max

otherwise number\_repeat\_value would store 4 the next repeated sequence

also it stores the index of the max index of the repeated value

if(this.number\_repeat\_count >= this.number\_repeat\_count\_max)

{

this.number\_repeat\_value\_max = this.number\_repeat\_value;

this.max\_count\_end\_index = count;

}

5b) this if statement finds the starting value of the largest count of repeated inputs

if(this.number\_repeat\_count == this.number\_repeat\_count\_max )

{

this.max\_count\_start\_index = count ;

}

5c) Big O notation is n Since there is a single for loop without any boundry modifications

anaconda java documentation and atom text editor

for ios since I know you use Ios I think I use windows.

anaconda installer link

<https://www.anaconda.com/products/individual#Downloads>

atom text editor link

<https://atom.io/>

// but this is for windows looks like there is a mac version in the other platforms link

for windows my premade bulk installer should work.

<https://github.com/liu-bruce/anaconda_bulk_installer.git>

command:

conda update –all -y

//for all updates suggested for

anaconda command in command line for mac install

<https://anaconda.org/cyclus/java-jdk>

anaconda command for gcc since I know u use c++

<https://anaconda.org/conda-forge/gcc>

java usage commands

javac file\_name.java

// compiles the .class file

//if the file generates a package

javac -d . file\_name\_1.java file\_name\_2.java

after compiling

java file\_name

// without the .class file type should run the file

gcc commands

gcc file\_name\_1.c file\_name.h file\_name\_2.c

I think for c++ it is gpp

but I will test that in the summer when I write an os in c++