********** OUTPUT **********

It correctly checks and does not find a consecutive number

```
Welcome to Online IDE!! Happy Coding :)

This is the number being checked: 100

This is the number being checked: 4

This is the number being checked: 200
```

This is correctly beginning to check number 1 with consecutive numbers in the array. But it spirals off and unable to find out where to adjust the loop.

```
This is the number being checked: 1
this is next consective number:2
3 will be checked against remaining loop
3 will be checked against remaining loop
3 will be checked against remaining loop
3 will be checked against remaining loop
3 will be checked against remaining loop
This should find: 3
This is next number: 3
2
***number appeared consecutive:***2
this is the boolean output:true
this is next consective number:2
4 will be checked against remaining loop
4 will be checked against remaining loop
This should find: 4
This is next number: 4
3
***number appeared consecutive:***3
this is the boolean output:true
this is next consective number:2
5 will be checked against remaining loop
5 will be checked against remaining loop
5 will be checked against remaining loop
5 will be checked against remaining loop
```

This is correctly beginning to check number 3 with consecutive numbers in the array and finds one consecutive number

```
This is the number being checked: 3
this is next consective number:4
5 will be checked against remaining loop
5 will be checked against remaining loop
5 will be checked against remaining loop
5 will be checked against remaining loop
5 will be checked against remaining loop
5 will be checked against remaining loop
***number appeared consecutive:***2
this is the boolean output:false
```

```
This is the number being checked: 2
this is next consective number:3
4 will be checked against remaining loop
4 will be checked against remaining loop
This should find: 4
This is next number: 4
***number appeared consecutive:***2
this is the boolean output:true
```

UNFORTUNATELY THE OUTPUT IS WRONG FOR LONGEST CONSECUTIVE STREAK

IT IS BELIEVED THE differenceCheck variable in adjusting to initial array element I is causing issues.

```
***************

Longest length consecutive sequence: 6
***************
```

CODE

```
/*
Online Java - IDE, Code Editor, Compiler

Online Java is a quick and easy tool that helps you to build, compile, test your programs online.
*/

public class Main
{
   public static void main(String[] args) {
      System.out.println("Welcome to Online IDE!! Happy Coding :)");
      int []nums = new int[]{100,4,200,1,3,2};
```

```
int setStart=0;
int differenceCheck=1;
int count=1;  // this keeps track consecutive numbers.
boolean nextnumberconsecutive;

int[] totalStore = new int[nums.length];

int temp = 0;

for (int i=0; i< nums.length; i++)   // this will go through each element in array
{
   System.out.println("\nThis is the number being checked: " + nums[i]);
   differenceCheck=1;

   for (int j=0; j<nums.length; j++)  // this is used to compare each element to array element in previous loop
                              // However this is not a sufficient loop since if the next consecutive integer is found,
                              // it would not continue process to check for next consecutive.
                              //Hence another nested loop required for array elements k
   {
      if (j==i)    // this will prevent same number being compared and increment inner loop by 1. However not critical since identical array element can not interfere

      {
         j++;
      }

      if (j!=nums.length)  //The whole process will continue as long as the inner loop does not hit last element
      {

         if (nums[j]==nums[i]+differenceCheck)   // if the element in array is next consecutive number to i
         {
            do     // perform this loop whilst elements of the array are searched (excluding i) until number in consecutive
                  // sequence not found
            {

               differenceCheck++;  // this will ensure next time this loop is entered, the initial number will be compared
                              // seeking the next consecutive number

               System.out.println("this is next consective number:" + nums[j]);
               count++;

               nextnumberconsecutive = nextnumbercheck(nums[i]+differenceCheck, nums, count, totalStore);
               //this calls a method. It will ensure that next searching of array elements will find element differenceCheck from initial array element

               System.out.println("***number appeared consecutive:***" + differenceCheck);
               totalStore[i]=differenceCheck;
```

```
                System.out.println("this is the boolean output:" + nextnumberconsecutive);
                j=nums.length-1;
                }while(nextnumberconsecutive==true);


            }
          }
        }
    }

    for (int max: totalStore)    // this will check all the totals stored consecutive numbers and
output maximum
                        //this will fail here since scope of variable is in other static method
                        //this can not be moved to other static method due to return of the method
    {
      System.out.println("MMMM "+ max + "  MMMM ");

      if (max>temp)
      {
        temp=max;
      }
    }

    System.out.println("*****************");
    System.out.println("\nLongest length consecutive sequence: " + temp);
    System.out.println("*****************");
  }

  static boolean nextnumbercheck(int nextNum, int[] nums, int differenceCheck, int[]
totalStore)
  {
    for (int i=0; i<nums.length; i++)
    {

      System.out.println(nextNum + " will be checked against remaining loop");


      if (i!=nums.length)
      {

      if (nextNum==nums[i])
      {
        System.out.println("This should find: " + nextNum);
        //count++;
        System.out.println("This is next number: " + (nums[i]));
        totalStore[i]=differenceCheck;
        System.out.println(differenceCheck);
        return true;
      }

    }
  }
    return false;
```

```
    }

}
```