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Beginner Java(JD521)

Formal Assesment 1

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Introduction

I need to make a program to ask for a name and surname and to remove spaces between the name and surname and to count the length of the name and surname and to populate the array with random numbers in the range of 10 to 50 and to Insertion sort the array and do a binary search to delete an element from the array and display all output's.

Program Content

Source Code

Java Utils Library Importing

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package dragonkiller;
import java.util.*;
/**
```

Name en surname store in variable

```
 * @author Albert Michael Ludick
 */
public class DragonKiller {
    static Scanner Userinput = new Scanner(System.in);
    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) {
        try{
            System.out.println("Please enter your name and surname.");
            String nameSurname = Userinput.nextLine();
            System.out.println(nameSurname); //Print the value that the user enters

            //-----
```

Take the whitespace away from the namesurname variable

And count the namesurname variable length

```
String NewNamesurname = nameSurname.replaceAll("\\s+", ""); //takes space
between the name and surname away
*/
int LenNameSurname = NewNamesurname.length(); //count the length of the
name and surname variable
*/
System.out.println(NewNamesurname); //displays the variable results

//-----
```

Print the length of the namesurname variable

And populate the array with PsuedoRandom numbers in array size is equals to the size of the NameSurname Variable

```

System.out.println("This is the length of the string."+LenNameSurname);
//above prints the result of the counted variable Namesurname
RandomGen(NewNamesurname);/*call the method to populate the array with
PsuedoRandom Numbers form the Random class
*/
}catch(Exception ex){ //catches errors from userside
    System.out.println(ex); //displays error to user
}
}

```

The Randomizing Method

```

static void RandomGen(String String1){
    int[] arrayDragon= new int[String1.length()];/* making the array
    the size of the Namesurname variable
    */
    Random randomNum = new Random();//instatiating the random class object
    for (int i=0;i < arrayDragon.length;i++){
        int Randomnumber = randomNum.nextInt(50);//random generation to 0-50
        int RandomRangeCheck = Randomnumber;
        if(RandomRangeCheck> 10){//setting up a check to ensure array is
            //populated in the range of 10-50
            arrayDragon[i]=Randomnumber;
        }
        else{//Regenerating the Randomnumber if not between 10-50
            Randomnumber = randomNum.nextInt(50);
            arrayDragon[i]=Randomnumber;
        }
    }
    System.out.println("This is the psuedorandom generated number"+" "
    +arrayDragon[i]+" "+"And in the index of"+" "+ i+" "+"array.");
}

```

The Insertion sort method

And the calling of the Insertion sort method and the binary search Method

```

System.out.println("This is the psuedorandom generated number"+" "
    +arrayDragon[i]+" "+"And in the index of"+" "+ i+" "+"array.");
}
System.out.println(Arrays.toString(InsertionSort(arrayDragon)));//calling
//the InsertionSort Method to sort array for binary search
//-----
KillerBinarySearch(arrayDragon);
}
static int[] InsertionSort(int[] arrayDragon){
    Arrays.sort(arrayDragon);//sorting the array from small to big
    return arrayDragon;
}

```

The Binary Search Method.

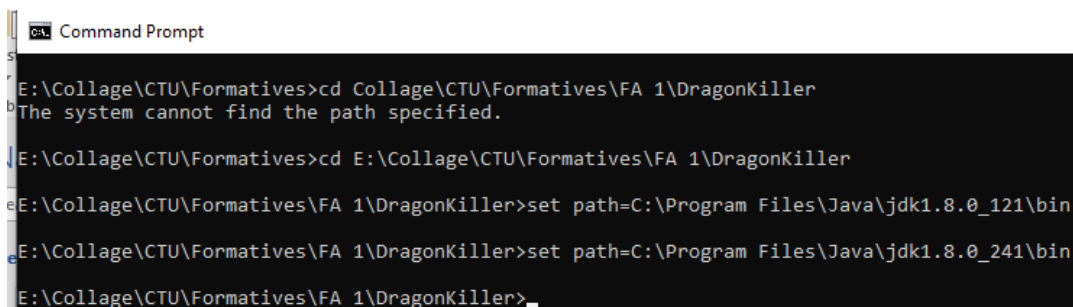
```

static void KillerBinarySearch(int[] arrayDragon) {
    try{
        System.out.println("pls enter the key value to be search "
            + "for and killed(deleted) in the array");
        //above asking the user to input the element to be deleted from array
        for(int i = 0; i < arrayDragon.length; i++){
            int SearchIndex = Userinput.nextInt();
            int EndSearch = Arrays.binarySearch(arrayDragon, SearchIndex); /*
            searches for the specified value in the array to be killed(deleted)
            binary search
            */
            arrayDragon[EndSearch]=0;
            /*
            this deletes the specified value in the array to be killed(deleted)
            */
            System.out.println("This is the killed value"+" "+SearchIndex+" "
                + "and this is the index of the killed value"+" "+EndSearch);
            System.out.println(Arrays.toString(arrayDragon)); //printing array
        }
    } catch (Exception ex) {
        System.out.println(ex);
    }
}
}

```

Command Prompt Compile and running Commands

Setting variable path for java



```

C:\> Command Prompt

E:\Collage\CTU\Formatives>cd Collage\CTU\Formatives\FA 1\DragonKiller
The system cannot find the path specified.

E:\Collage\CTU\Formatives>cd E:\Collage\CTU\Formatives\FA 1\DragonKiller

E:\Collage\CTU\Formatives\FA 1\DragonKiller>set path=C:\Program Files\Java\jdk1.8.0_121\bin

E:\Collage\CTU\Formatives\FA 1\DragonKiller>set path=C:\Program Files\Java\jdk1.8.0_241\bin

E:\Collage\CTU\Formatives\FA 1\DragonKiller>_

```

Changing directory to the .java file

```
Command Prompt

E:\Collage\CTU\Formatives>cd Collage\CTU\Formatives\FA 1\DragonKiller
The system cannot find the path specified.

E:\Collage\CTU\Formatives>cd E:\Collage\CTU\Formatives\FA 1\DragonKiller

E:\Collage\CTU\Formatives\FA 1\DragonKiller>set path=C:\Program Files\Java\jdk1.8.0_121\bin

E:\Collage\CTU\Formatives\FA 1\DragonKiller>set path=C:\Program Files\Java\jdk1.8.0_241\bin

E:\Collage\CTU\Formatives\FA 1\DragonKiller>javac DragonKiller\.java
javac: file not found: DragonKiller\.java
Usage: javac <options> <source files>
use -help for a list of possible options

E:\Collage\CTU\Formatives\FA 1\DragonKiller>cd E:\Collage\CTU\Formatives\FA 1\DragonKiller\src\dragonkiller

E:\Collage\CTU\Formatives\FA 1\DragonKiller\src\dragonkiller>
```

Compiling through Command Prompt with javac

```
E:\Collage\CTU\Formatives\FA 1\DragonKiller\src\dragonkiller>javac DragonKiller.java

E:\Collage\CTU\Formatives\FA 1\DragonKiller\src\dragonkiller>
```

Running the program through Command Prompt

```
Administrator: Command Prompt - java -jar "E:\Collage\CTU\Formatives\FA 1\DragonKiller\dist\DragonKiller.jar"
Microsoft Windows [Version 10.0.17763.973]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Windows\system32>java -jar "E:\Collage\CTU\Formatives\FA 1\DragonKiller\dist\DragonKiller.jar"
Please enter your name and surname.
mike lud
mike lud
mikelud
This is the length of the string.7
This is the psuedorandom generated number 44 And in the index of 0 array.
This is the psuedorandom generated number 26 And in the index of 1 array.
This is the psuedorandom generated number 46 And in the index of 2 array.
This is the psuedorandom generated number 10 And in the index of 3 array.
This is the psuedorandom generated number 16 And in the index of 4 array.
This is the psuedorandom generated number 28 And in the index of 5 array.
This is the psuedorandom generated number 12 And in the index of 6 array.
this below is the sorted array
[10, 12, 16, 26, 28, 44, 46]
pls enter the key value to be search for and killed(deleted) in the array
```

```
C:\Windows\system32>java -jar "E:\Collage\CTU\Formatives\FA 1\DragonKiller\dist\DragonKiller.jar"
Please enter your name and surname.
mike lud
mike lud
mikelud
This is the length of the string.7
```

```
This is the psuedorandom generated number 44 And in the index of 0 array.
This is the psuedorandom generated number 26 And in the index of 1 array.
This is the psuedorandom generated number 46 And in the index of 2 array.
This is the psuedorandom generated number 10 And in the index of 3 array.
This is the psuedorandom generated number 16 And in the index of 4 array.
This is the psuedorandom generated number 28 And in the index of 5 array.
This is the psuedorandom generated number 12 And in the index of 6 array.
```

```
this below is the sorted array  
[10, 12, 16, 26, 28, 44, 46]  
pls enter the key value to be search for and killed(deleted) in the array
```

```
12  
This is the killed value 12 and this is the index of the killed value 1  
[10, 0, 16, 26, 28, 44, 46]
```

Conclusion:

There for I have made a program that asks the user for a name and surname and stores the value in a variable and the program removes the space between name and surname. Instantiate an array with the NewNameSurname Variable's Length and populates the array with PsuedoRandom Number's

It will display them with the value stored in the array and the corresponding index in array and an insertion sort is called to sort array from the smallest to biggest values for the binary search method else the binary search will not Work and a binary search is called to kill a certain value in the array or delete a certain value in the array.

BibloGraphy:

Websites:

GeeksforGeek : <https://www.geeksforgeeks.org/>

And Javapoint : <https://www.javatpoint.com/>

Books:

Java_ A Beginner's Guide, Eighth Edition

Appendix

No Extra files or media.