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Pg. 232 – 236 Java Programming *A comprehensive Introduction*

Section 1: Define

Static variables- static variable is a variable that has been allocated statically—whose lifetime or "extent" extends across the entire run of the program.

Static methods- Java static method program: static methods in Java can be called without creating an object of class.

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ONLINE RESOURCE: http://tutorials.jenkov.com/java-io/file.html

Understand and define methods in the Java File class-

java.io.File *file* = **new** java.io.File("*filelocation.filetype*");

```
System.out.println("Does it exist?" + file.exists());

System.out.println("The file has " + file.length() + " bytes ");

System.out.println("Can it be read?" + file.canRead());

System.out.println("Can it be written to?" + file.canWrite());

System.out.println("Is it a directory" + file.isDirectory());

System.out.println("Is it a file?" + file.isFile());

System.out.println("Is it absolute? " + file.isAbsolute());
System.out.println("Absolute path is " + file.getAbsolutePath();

System.out.println("Is it Hidden? " + file.isHidden());

System.out.println("Last Modified on " + file.lastModified());
```

```
System.out.println("Last Modified on " +
    new java.util.Date(file.lastModified()));
```

throws Exception vs Error-

Understand and define methods in the PrintWriter class-

```
java.io.PrintWriter output = new java.io.PrintWriter(file);
```

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Programming Tasks:

Task 1- Task 1- Page 252, #20 Java Programming *A comprehensive Introduction*

Modified

Implement a class **Arrayplus1()** that takes an integer array **data** and an **int x** as its size. Create a method inside the class **Arrayplus1()**

that creates a new array whose length is one greater than **data's** length.

Then create a method to copy all data's elements into the new array and add the value of x into the last element of the array. (Search for java methods for copying Arrays)

Create a separate **print()** class that takes the newly created array and prints its contents in a text file.

Use main to operate your program.

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Attach Snipping Photos of source code and output.

```
1
2   package javaapplication1;
3
5   import java.io.File;
6
7   import java.util.Scanner;
8
9   class Arrayplus1{
10      int size;
11      int[] data, newary;
12
13      public Arrayplus1(int x, int[] array) {
14          size = x;
15          data = array;
16      }
17
18      public void createarray() {
19          newary = new int[data.length + 1];
20      }
21
22      public void copyarray() {
23          for(int i = 0; i < data.length; i++) {
24              newary[i] = data[i];
25          }
26
27          newary[newary.length-1] = size;
28
29      }
30
31      public void printall() {
32          for(int i = 0; i < newary.length; i++) {
33              System.out.println(newary[i]);
34          }
```

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```
34      }
35
36      public void print() throws Exception{
37          //java.io.File file = new java.io.File("text1.txt"); //run the code
38                                                              //it creates a file automatically
39
40          java.io.File file = new java.io.File("C:\\Users\\student\\Documents\\NetBeansProjects\\JavaApplication1\\text1.txt");
41                                                              // access in to the file
42
43          /*
44          if(file.exists()) {
45              System.exit(0);
46          }*/
47
            java.io.PrintWriter output = new java.io.PrintWriter(file);
49          for(int i = 0; i < newary.length; i++) {
50              output.println(newary[i]);
51          }
52
53          output.println(file.getAbsolutePath());
54
55          output.close();
56
57      }
58
59
60  }
61
62  public class JavaApplication1 {
63
64      public static void main(String[] args) throws Exception{
65
66          int[] ary = {1, 2, 3, 4, 5, 6, 1};
67          int x = ary.length;
68
69          Arrayplus1 first = new Arrayplus1(x, ary);
70
71          first.createarray();
72          first.copyarray();
73          first.print();
74
75
76      }
77
78  }
79
```

Arrayplus1

Output - JavaApplication1 (run)

```
run:
BUILD SUCCESSFUL (total time: 0 seconds)
```

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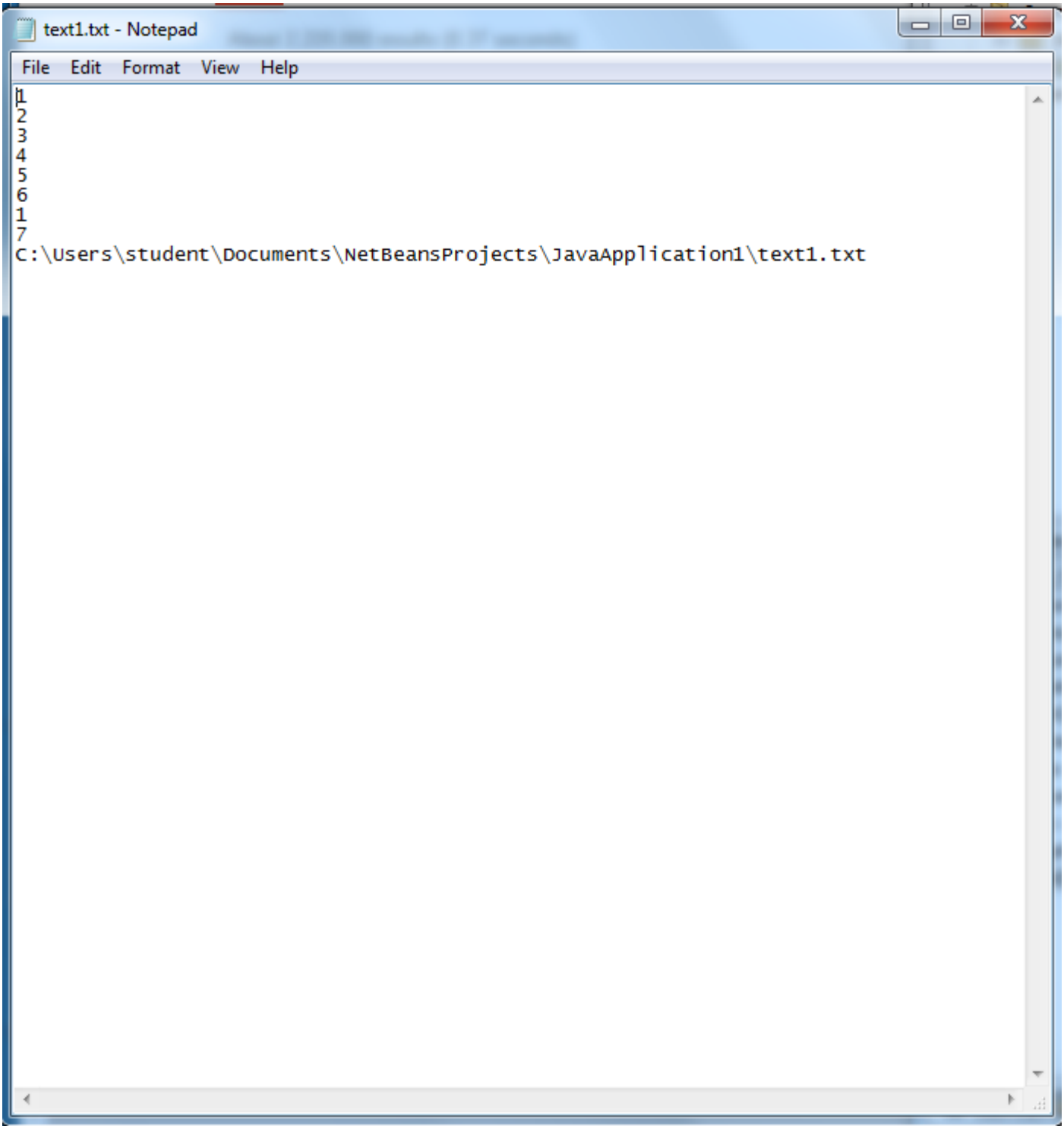

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Task 2- Enhance Assignment #4 Task2

Create a class that allows the user to input 7 days of the week which will be stored in an Array[] of strings, and the corresponding temperature for each day which will be stored in an Array[] of doubles. Prompt the user before she enters each new day and temperature.

Output the day and corresponding temperature entered in a println output.

Then create a static method in the "programmer created class" for averaging the temperatures for the week.

Output: Print the average temperature for the week.

Attach Snipping photos of Source code(programmer created class, println output)

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```
1
2   package javaapplication1;
3
4   import java.util.Scanner;
5
6   class DayTemp {
7       String[] sarray = new String[7];
8       double[] iarray = new double[7];
9
10      public void prompt(){
11          Scanner input = new Scanner(System.in);
12          Scanner sput = new Scanner(System.in);
13          for(int i = 0; i < 7; i++) {
14              System.out.println("Enter Day: ");
15              sarray[i] = input.nextLine();
16              System.out.println("Enter temperature: ");
17              iarray[i] = sput.nextDouble();
18          }
19      }
20
21      public void print(){
22          for(int i = 0; i < 7; i++) {
23              System.out.println(sarray[i] + " was " + iarray[i] + " Degrees");
24          }
25      }
26
27      public double totaltemp() {
28          double a = 0;
29          for(int i = 0; i < 7; i++) {
30              a += iarray[i];
31          }
32          return a;
33      }
33      }
34
35      public static double average(double a) {
36          return a / 7;
37      }
38
39
40  }
41  public class NewClass {
42
43      public static void main(String[] args) {
44          DayTemp x = new DayTemp();
45          x.prompt();
46          x.print();
47
48          System.out.println("The Average temperatures for the week is: "
                    + x.average(x.totaltemp()));
50
51      }
52
53  }
54
```

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```
run:
Enter Day:
Monday
Enter temperature:
17
Enter Day:
Tuesday
Enter temperature:
12
Enter Day:
Wednesday
Enter temperature:
15
Enter Day:
Thursday
Enter temperature:
9
Enter Day:
Friday
Enter temperature:
11
Enter Day:
Saturday
Enter temperature:
20
Enter Day:
Sunday
Enter temperature:
39
Monday was 17.0 Degrees
Tuesday was 12.0 Degrees
Wednesday was 15.0 Degrees
Thursday was 9.0 Degrees
Friday was 11.0 Degrees
Saturday was 20.0 Degrees
Sunday was 39.0 Degrees
The Average temperatures for the week is: 17.571428571428573
BUILD SUCCESSFUL (total time: 41 seconds)
```