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**Enrollment number - 21162101012**

**Branch - CBA , Batch - 31**

## **OOP Practical 18**

**Problem** : Athiya was assigned a task to categorize the odd and even numbers from a set of numbers read collectively which were present in a file. Develop the module in such a way that the storage of odd numbers and even numbers takes place in separate files respectively.

### **Program** :

```
package Hare_Krishna;

import java.awt.*;
import java.io.BufferedReader;
import java.io.File;
import java.io.FileReader;
import java.io.FileWriter;
import java.util.Arrays;

public class Prac_18
{
    static public void main(String... s)
    {
        String name;
        File main = new File("number.txt");
        try
        {
            if(main.exists())
```

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```
{
    try (FileReader reader = new FileReader(main))
    {
        BufferedReader br = new BufferedReader(reader);
        if((name = br.readLine()) != null)
        {
            System.out.println(name);
            method(name);
        }
    }
}
else
{
    main.createNewFile();
}
}
catch (Exception exc)
{
    exc.printStackTrace();
}
}
```

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```
static void method(String number)
{
    int[] array = new int[number.length()];
    for(int i=0; i<number.length(); i++)
    {
        array[i] =
Integer.parseInt(String.valueOf(number.charAt(i)));
    }
    int[] even_array = new int[4];
    int[] odd_array = new int[5];
    int e=0;
    int o=0;
    for (int j : array)
    {
        if (j % 2 == 0)
        {
            even_array[e] = j;
            e++;
        }
        else
        {
```

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```
        odd_array[o] = j;
        o++;
    }
}
try
{
    Desktop dex = Desktop.getDesktop();
    File even = new File("even.txt");
    even.createNewFile();
    FileWriter for_even = new FileWriter(even);
    for_even.write(Arrays.toString(even_array));
    dex.open(even);
    for_even.close();

    File odd = new File("odd.txt");
    odd.createNewFile();
    FileWriter for_odd = new FileWriter(odd);
    for_odd.write(Arrays.toString(odd_array));
    dex.open(odd);
    for_odd.close();
}
```

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```
        catch (Exception exc)
        {
            exc.printStackTrace();
        }
        System.out.println("All Even Numbers");
        for(int i=0; i<4; i++)
        {
            System.out.print(even_array[i] + " ");
        }
        System.out.println();
        System.out.println("All Odd Numbers");
        for(int i=0; i<5; i++)
        {
            System.out.print(odd_array[i] + " ");
        }
    }
}
```

**Output :** (Neglect red error lines in 2nd output. They are GUI GTK objects theme errors for **gedit**, the default text editor in my Linux which is **opened by this program**)

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The screenshot shows an IDE window for a project named 'Hare\_Krishna'. The project structure on the left includes files like 'IBM\_3dot1', 'IBM\_3dot2', 'pizza', 'prac\_2' through 'prac\_18', 'README.md', 'StrRev', 'This.java', 'TowerofHanoi', 'UseofThis.java', 'YSL\_ex\_inhrt1.java', 'YSL\_ex\_inhrt2.java', 'YSL\_p6', 'Hare\_Krishna.iml', 'mariadb-java-client-3.1.0.jar', and 'number.txt'. The main editor shows the content of 'number.txt' with the number '6432'. The bottom status bar indicates '1:5 LF UTF-8 4 spaces P main'.

The screenshot shows the source code of 'Prac\_18.java' in the IDE. The code defines a package 'Hare\_Krishna' and imports various Java classes. It contains a class 'Prac\_18' with a static method 'main' that reads a file 'number.txt' and prints its contents. The terminal output shows the execution of the program, displaying the numbers '6432' and '0'. The terminal also shows several warnings from the 'LibhsPELL.so.0' plugin.

```
package Hare_Krishna;

import java.awt.*;
import java.io.BufferedReader;
import java.io.File;
import java.io.FileReader;
import java.io.FileWriter;
import java.util.Arrays;

public class Prac_18
{
    static public void main(String... s)
    {
        String name;
        File main = new File (pathname: "number.txt");

        try
        {
            if(main.exists())
            {
                try (FileReader reader = new FileReader(main))
                {
                    BufferedReader br = new BufferedReader(reader);
                    if((name = br.readLine()) != null)
                    {
                        System.out.println(name);
                        method(name);
                    }
                }
            }
            else
            {
                main.createNewFile();
            }
        }
    }
}
```

Run: /usr/lib/jvm/default/bin/java  
-javaagent:/usr/share/idea/lib/idea\_rt  
-jar=34311:/usr/share/idea/bin -Dfile.encoding=UTF-8  
-classpath /home/yash/Documents/sem3practicals/OOP  
/Hare\_Krishna/bin/production/Hare\_Krishna:/home/yash/.m2/repository/org/jetbrains/kotlin/kotlin-stdlib-jdk8/1.7.10/kotlin-stdlib-jdk8-1.7.10.jar:/home/yash/.m2/repository/org/jetbrains/kotlin/kotlin-stdlib/1.7.10/kotlin-stdlib-1.7.10.jar:/home/yash/.m2/repository/org/jetbrains/kotlin/kotlin-stdlib-common/1.7.10/kotlin-stdlib-common-1.7.10.jar:/home/yash/.m2/repository/org/jetbrains/annotations/13.0/annotations-13.0.jar:/home/yash/.m2/repository/org/jetbrains/kotlin/kotlin-stdlib-jdk7/1.7.10/kotlin-stdlib-jdk7-1.7.10.jar:/home/yash/Documents/sem3practicals/OOP/Hare\_Krishna/mariadb-java-client-3.1.0.jar Hare\_Krishna.Prac\_18  
6432  
All Even Numbers  
6 4 2 0  
All Odd Numbers  
3 0 0 0  
\*\* (gedit:252031): WARNING \*\*: 23:12:21.384: Error loading plugin: LibhsPELL.so.0: cannot open shared object file: No such file or directory  
\*\* (gedit:252031): WARNING \*\*: 23:12:21.384: Error loading plugin: LibhsPELL.so.0: cannot open shared object file: No such file or directory  
\*\* (gedit:252031): WARNING \*\*: 23:12:21.387: Error loading plugin: LibhsPELL.so.5: cannot open shared object file: No such file or directory

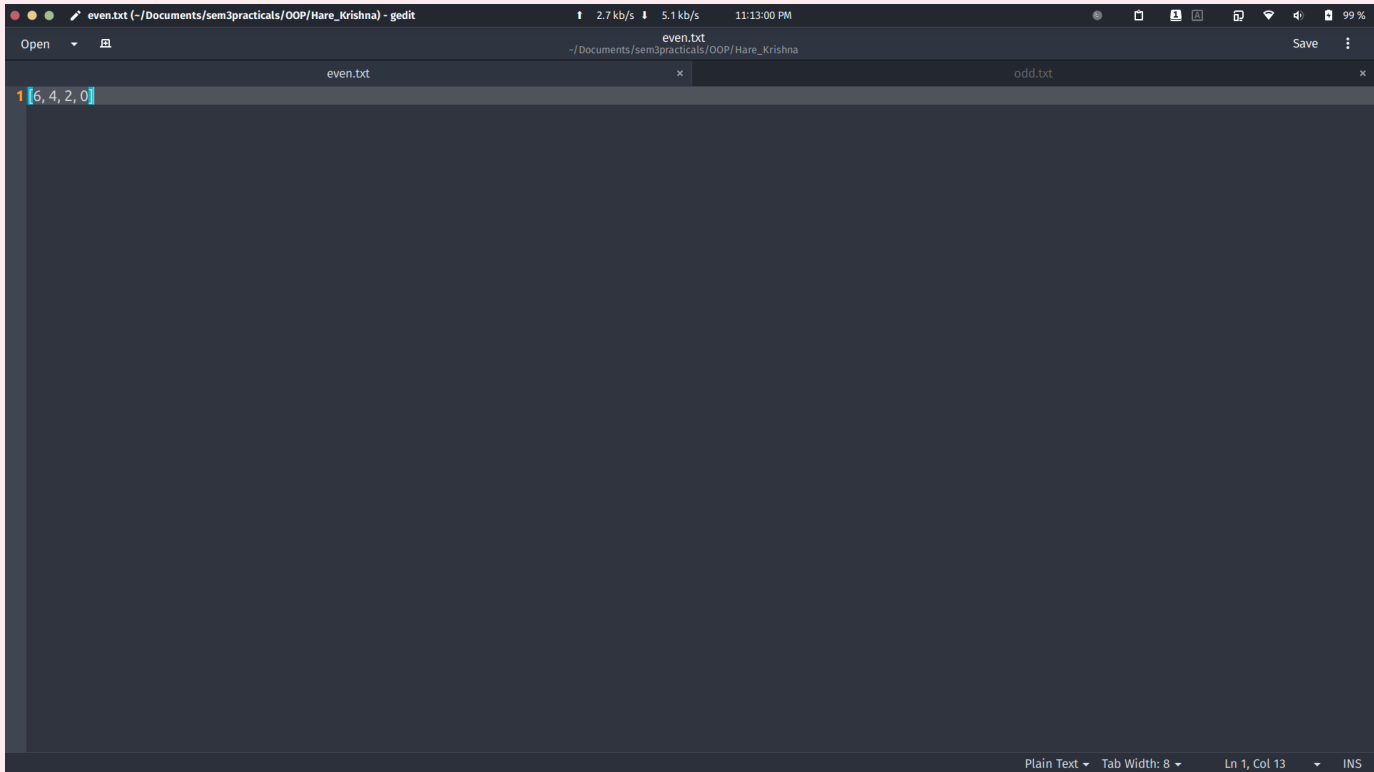
42:1 LF UTF-8 4 spaces P main

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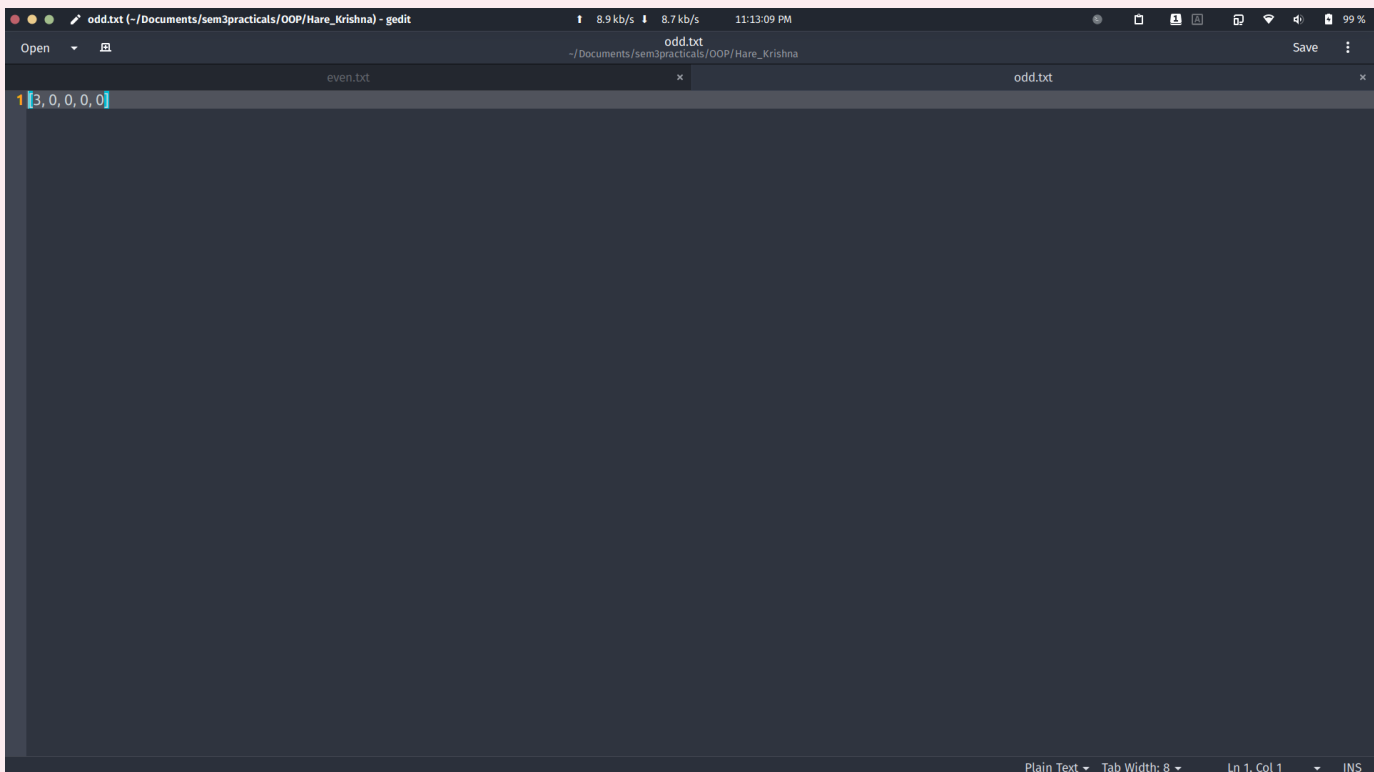
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The screenshot shows a gedit editor window titled "even.txt (-/Documents/sem3practicals/OOP/Hare\_Krishna) - gedit". The window has a dark theme and contains a single line of code: `[6, 4, 2, 0]`. The cursor is positioned at the end of the line. The status bar at the bottom indicates "Plain Text", "Tab Width: 8", "Ln 1, Col 13", and "INS".



The screenshot shows a gedit editor window titled "odd.txt (-/Documents/sem3practicals/OOP/Hare\_Krishna) - gedit". The window has a dark theme and contains a single line of code: `[3, 0, 0, 0, 0]`. The cursor is positioned at the end of the line. The status bar at the bottom indicates "Plain Text", "Tab Width: 8", "Ln 1, Col 1", and "INS".