**Java Lab Assignment – 6**

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**Experiment -**

**Aim:** Write a Java program that read from a file and write to file by handling all file related exceptions.

**Concepts Used:** File Input and output, exception handling

Algorithm:

1. Start
2. import java.io package
3. fileName = “file.txt”
4. File f = new File(fileName)
5. if(!.f.exists()) then
6. f.createNewFile()
7. endif
8. try
9. FileReader fr = new FileReader(file)
10. File copy = File(“copy.txt”)
11. if(!copy.exists()) then
12. copy.createNewFile()
13. endif
14. FileWriter fw = new FileWriter(copy)
15. while i=fr.read() and i!=-1 do
16. fw.write(i)
17. endwhile
18. endtry
19. catch FileNotFoundException e
20. Print “File is not found”
21. endcatch
22. Stop

**Result:** The program was compiled successfully and the required output was obtained

**Program Code:**

/\* Java Program to read and write to a file

\* by: Rohit Karunakaran

\*

\*/

import java.io.\*;

public class ReadWriteToFile

{

public static void main(String args[]) throws IOException, FileNotFoundException

{

//BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

int i;

String fileName = "file.txt";

File originalFile = new File(fileName);

if(!originalFile.exists()) originalFile.createNewFile();

try

{

FileReader fileReader1 = new FileReader(fileName);

File copy = new File("copy.txt");

if(!copy.exists())

{

copy.createNewFile();

}

try

{

FileWriter fileOutput = new FileWriter(copy);

System.out.println("The String in the old file is : ");

while ((i=fileReader1.read())!=-1)

{

fileOutput.write((char)i);

System.out.print((char)i);

}

System.out.println(" ");

fileOutput.flush();

fileOutput.close();

}

catch (FileNotFoundException e)

{

System.out.println("The File is not writable or the file doesnt exist");

e.printStackTrace();

}

finally

{

fileReader1.close();

}

FileReader fileReader2 = new FileReader(copy);

System.out.println("\nThe contents of the new file is :");

while((i=fileReader2.read())!=-1)System.out.print((char)i);

System.out.print("\n");

}

catch (FileNotFoundException e)

{

System.out.println("File is not found or the file is not readable "+e);

}

}

}

**Sample Output:**

The String in the old file is :

I am a file and I think there is a copy of me somewhere here

The contents of the new file is :

I am a file and I think there is a copy of me somewhere here

**Lab Experiment -**

**Aim:** Write a Java program that reads a line of integers, and then displays each integer, and the sum of all the integers (Use String Tokenizer class of java.util)

**Concepts Used:** String Tokenizer, Console input

**Algorithm:**

**Input:** A string containing of digits

**Output:** Sum of the digits

**Steps**

1. Start
2. import java.io package and StringTokenizer Class from java.util package
3. sum = 0
4. BufferedReader br = new BufferedReader(new InputStreamReader(System.in))
5. s = br.readLine()
6. StringTokenizer st = new StringTokenizer(s,”0123456789”,true)
7. while(st.hasMoreTokens())do
8. try
9. a = Integer.parseInt(st.nextToken())
10. sum+=a
11. endtry
12. catch NumberFormatException
13. print ”Number expected”
14. endcatch
15. endwhile
16. Stop

**Reuslt:** The program was successfully compiled and the required output was obtained

**Program Code:**

/\* Read interger as a stirng and print it's sum

\* File Name: StringTokenizerExample.java

\*

\* Done By: Rohit Karunakaran

\* \*/

import java.io.\*;

import java.util.StringTokenizer;

public class StringTokenizerExample

{

public static void main(String args[]) throws IOException

{

int sum = 0,a=0;

System.out.println("Enter an Integer Value");

String s = new String(new BufferedReader(new InputStreamReader(System.in)).readLine()); //reads a line from the input

StringTokenizer st = new StringTokenizer(s,"0123456789",true); //if the boolean argument is true each of the delimeter is considered as tokens themselves

System.out.print("The Number entered = ");

while(st.hasMoreTokens())

{

try

{

a = Integer.parseInt(st.nextToken());

System.out.print(a);

}

catch(NumberFormatException e)

{

System.out.println("Expected an integer value");

System.out.println("\nHere is the stack trace");

e.printStackTrace();

}

sum+=a;

}

System.out.println("\nSum = "+sum);

}

}

**Sample Input 1:**

10000000000000000000000000000000000000000000000000000009

**Sample output 1:**

Enter an Integer Value : 10000000000000000000000000000000000000000000000000000009

The Number entered = 10000000000000000000000000000000000000000000000000000009

Sum = 10

**Sample Input 2:**

1329

**Sample output 2**:

Enter an Integer Value : 1329

The Number entered = 1329

Sum = 15

**Sample input 3:**

247298379237

**Sample output 3**

Enter an Integer Value : 247298379237

The Number entered = 247298379237

Sum = 63