Week6 – Batch 3

Monday, December 27, 2021 2:19 AM

1.To count the number of characters, vowels, lines and words in a given file.[Hint:Use read method]

```
import java.io.*;
import java.util.Scanner;
public class FileDemo {
public static void main(String[] args) throws IOException
{
File file = new File("C:\\Users\\dse\\Documents\\200968048- OOP\\Sample.txt");
FileInputStream fileInputStream = new FileInputStream(file);
InputStreamReader inputStreamReader = new InputStreamReader(fileInputStream);
BufferedReader bufferedReader = new BufferedReader(inputStreamReader);
String str;
int vowelCount = 0;
int characterCount = 0;
int sentenceCount = 0;
int wordCount = 0;
while ((str = bufferedReader.readLine()) != null) {
{
for (int i = 0; i < str.length(); i++)
{
if (str.charAt(i)== 'a' || str.charAt(i)== 'e'|| str.charAt(i) == 'i'|| str.charAt(i) == 'o' || str.charAt(i) == 'u'
|| str.charAt(i)== 'A' || str.charAt(i)== 'E'|| str.charAt(i) == 'I'|| str.charAt(i) == 'O' || str.charAt(i) ==
'U')
{
vowelCount++;
}
}
characterCount += str.length();
String words[] = str.split("\\s+");
wordCount += words.length;
String sentence[] = str.split("[!?.:]+");
sentenceCount += sentence.length;
}
}
System.out.println("Total Vowels: " + vowelCount);
System.out.println("Total Words: "+ wordCount);
System.out.println("Total Lines: "+ sentenceCount);
System.out.println("Total Characters: "+ characterCount);
}
}
```

Output

Sample.txt:
Hello
My name is Aryaman
This is OOP with JAVA

Total Vowels: 15
Total words: 10
Total lines: 3
Total Characters: 44

2.Write a program to display all the files and directories of a directory using File object.

```
import java.io.File;
import java.io.IOException;

public class Test2 {
  public static void main(String[] args) {
    File file = new File("C:\\Users\\dse\\Downloads");
    String[] fileList = file.list();
    for(String str : fileList) {
       System.out.println(str);
     }
    File currentDir = new File("C:\\\\Users\\\\dse\\\\Downloads");
    displayDirectory(currentDir);

    }
    public static void displayDirectory(File dir)
    {
       try {
          File[] files = dir.listFiles();
           for (File file : files) {
              if (file.isDirectory()) {
                 System.out.println(
                    "Directory: "
                    + file.getCanonicalPath());
                displayDirectory(file);
              }
              else {
                System.out.println(
                    "     File: "
                    + file.getCanonicalPath());
              }
          }
       }
        catch (IOException e) {
          e.printStackTrace();
       }
  }
}
```

Output

desktop.ini
Teams_windows_x64 (1).exe
File: C:\Users\dse\downloads\desktop.ini
File: C:\Users\dse\downloads\Teams_windows_x64 (1).exe

3.Write a menu driven program to do the following: Write to a file, readfrom the file, copybytes from one file to another file [Hint:Use read and write methods]

```
import java.util.Scanner;
import java.io.*;
public class Test3{
public static void main(String args[]) throws IOException, EOFException{
Scanner scan= new Scanner(System.in);
File f1= new File("First.txt");
File f2= new File("FirstCopy.txt");
if(!f1.exists())
f1.createNewFile();
if(!f2.exists())
f2.createNewFile();
System.out.println("1.Write to a file");
System.out.println("2.Read from the file");
System.out.println("3.Copy contents of one file to another");
System.out.println("4.Exit");
int choice,ch;
while(true){
System.out.print(">");
choice=scan.nextInt();
scan.nextLine();
switch(choice){
case 1:
FileOutputStream bor= new FileOutputStream(f1,true);
System.out.println("Enter String:");
String s1=scan.nextLine();
byte b[]=s1.getBytes();
bor.write(b);
bor.write('\n');
bor.flush();
System.out.println("Successfully written!");
break;
case 2:
FileInputStream bir= new FileInputStream(f1);
System.out.println("READING FILE:");
while((ch=bir.read())!=-1){
System.out.print((char)ch);
}
break;
case 3:
FileInputStream bir2= new FileInputStream(f1);
FileOutputStream bor2= new FileOutputStream(f2);
while((ch=bir2.read())!=-1){
bor2.write(ch);
}
System.out.println("Files Copied");
break;
case 4:
System.out.println("Exited");
return;
default:
System.out.println("Invalid Choice!");
}
}
}
}
```

Output

1. Write to a file
2. Read from a file
3. Copy contents from one file to another
4. Exit

First.txt:
Hello World
Hello World

FirstCopy.txt:

> 1
Enter String: Hello World
Successfully Written!

>2
Reading File: Hello World
Hello World
Hello World

>3
Files Copied

>4
Exited

First.txt:
Hello World
Hello World
Hello World

FirstCopy.txt:
Hello World
Hello World
Hello World

4.To read and write primitive data using random access file andappend some information.[Hint:Use RandomAccessFile class]

```
import java.io.*;
import java.util.*;
public class Test4{
public static void main(String args[]) throws IOException, EOFException{
Scanner scan= new Scanner(System.in);
RandomAccessFile f1= new RandomAccessFile("Second.txt","rw");
long g= f1.getFilePointer();
String text = "Appended New Line";
f1.seek(f1.length());
f1.write(text.getBytes());
f1.close();
System.out.println("Completed appending");
}
}
```

Output

Second.txt: @6k..., Qild

Completed Appending

Second.txt: @6k..., Qild Appended New Line