

File Processing using the Java Programming Language

The following code demonstrates how to read and write data to a text file using the Java programming language.

```
public class Main
{
    public static void main(String[] args)
    {
        String filename = "Test.txt";

        // Create the file Test.txt.
        // If the file exist erase all content in the file.
        FileProcessing fP = new FileProcessing(filename);
        fP.inputBuffer = "Howdy.";
        fP.WriteDataToFile();

        // Append data to the file.
        // Automatically moves the cursor to a new line.
        fP.inputBuffer = "Welcome to Java Programming.";
        fP.AppendDataToFile();

        // Append more data to the file.
        fP.inputBuffer = "Good job!";
        fP.AppendDataToFile();

        // Read all data from the file and display it to
        // the Console
        fP = new FileProcessing(filename);
        fP.ReadDataAndStoreToBuffer();
        DisplayData(fP.outputBuffer);
    }

    //*****
    // DisplayData
    //*****
    public static void DisplayData(String buffer)
    {
        System.out.println(buffer);
    }
}
```

File Processing Class

```
import java.util.Scanner;
import java.io.*;
import java.io.IOException;

/**
 *
 * Provides for reading and writing data to a text file.
 *
 * @author Holger Findling
 *
 */
public class FileProcessing
{
    // Data Members
    String filename;
    String inputBuffer; // Data to file
    String outputBuffer; // Data from file

    File fptr;
    Scanner fin;

    /**
     * @param _filename
     * name of the text file to be opened
     */
    public FileProcessing(String _filename)
    {
        filename = _filename;
        inputBuffer = "";
        fptr = null;

        OpenFile();
    }

    /**
     * Opens a user defined text file and initializes fin and
     * the fptr.
     */
    public void OpenFile()
    {
        try
        {
            fptr = new File(filename);
            if (!fptr.exists())
            {
                System.out.println("OpenFile:Creating new file.");
                fptr.createNewFile();
            }
        }
    }
}
```

```

        }
        fin = new Scanner(fptr);
    }
    catch (IOException ex)
    {
        System.out.println("OpenFile:File exception occurred");
        ex.printStackTrace();
        System.exit(0);
    }
    return;
}

/**
 * Copies all data from the file to the outputBuffer
 */
public void ReadDataAndStoreToBuffer()
{
    outputBuffer = "";
    while (fin.hasNext()) {
        outputBuffer += fin.nextLine() + "\r\n";
    }
    fin.close();
    return;
}

/**
 * Copies the next line of data from the file to the
 * outputBuffer
 *
 * @return
 * One line of data stored in the output buffer.
 */
public String ReadNextLine()
{
    outputBuffer = "";
    if (fin.hasNext()) {
        outputBuffer = fin.nextLine() + "\r\n";
    } else {
        fin.close();
    }

    return outputBuffer;
}

/**
 * Copy the input buffer to file.
 */
public void WriteDataToFile()
{
    PrintWriter pw = null;
    try {

```

```

        pw = new PrintWriter(fptr);
        pw.println(inputBuffer);
    } catch (IOException ex) {
        System.out.println("WriteDataToFile:File exception occurred");
        ex.printStackTrace();
    } finally {
        pw.close();
    }
    return;
}

/**
 * Append the file by copying the input buffer to file.
 */
public void AppendDataToFile()
{
    FileWriter fw = null;
    PrintWriter ppw = null;

    try {
        fw = new FileWriter(fptr, true);
        ppw = new PrintWriter(fw);
        ppw.print(inputBuffer + "\r\n");
    } catch (IOException ex) {
        System.out.println("AppendDataToFile:File exception occurred");
        ex.printStackTrace();
    } finally {
        ppw.close();
    }
    return;
}
}
}

```