Next Generation Technologies Assignment 4 – Steganography

**\*I don’t know how to run the code with the text file**

Problem 1 code:

*/\*\*  
 \* CT255 - Assignment 4  
 \* Skeleton code for Steganography assignment.  
 \*  
 \** ***@author*** *Gavin Skehan  
 \** ***@version*** *1.0  
 \*/*import java.io.BufferedReader;  
import java.io.BufferedWriter;  
import java.io.FileReader;  
import java.io.FileWriter;  
import java.io.IOException;  
  
public class Stegano1  
{  
 */\*\*  
 \* Constructor for objects of class Stegano1  
 \*/* public Stegano1()  
 {  
 }  
  
 public static void main(String[] args) {  
 String arg1, arg2, arg3, arg4;  
 Boolean err = false;  
  
 if (args != null && args.length > 1) { // Check for minimum number of arguments  
 arg1 = args[0];  
 arg2 = args[1];  
  
 if (arg2 == "") {  
 err = true;  
 }  
 else if ((arg1 == "A") && (args.length > 3)){  
 // Get other arguments  
 arg3 = args[2];  
 arg4 = args[3];  
 if (arg3 == "" || arg4 == "") {  
 err = true;  
 }  
 else {  
 // Hide bitstring  
 *hide*(arg2, arg3, arg4);  
 }  
 }  
 else if (arg1 == "E"){  
 // Extract bitstring from text  
 *retrieve*(arg2);  
 }  
 else {  
 err = true;  
 }  
 }  
 else {  
 err = true;  
 }  
  
 if (err == true) {  
 System.*out*.println();  
 System.*out*.println("Use: Stegano1 <A:E><Input File><OutputFile><Binstring>");  
 System.*out*.println("Example: Stegano1 A inp.txt out.txt 0010101");  
 System.*out*.println("Example: Stegano1 E inp.txt");  
  
 }  
 }  
  
 static void hide(String inpFile, String outFile, String bitString) {  
 //  
 BufferedReader reader;  
 BufferedWriter writer;  
  
  
 try {  
 reader = new BufferedReader(new FileReader(inpFile));  
 writer = new BufferedWriter(new FileWriter(outFile));  
 String line = reader.readLine();  
 int i = 0;  
 while (line != null) {  
 // Your code starts here q1  
 if(i < bitString.length()){  
 // hiding bits as spaces at the end of the line  
 // 0 = one spaces  
 // 1 = two spaces  
 if(bitString.charAt(i)== 48){  
 line+=" "; // one space  
 }  
 else if (bitString.charAt(i)== 49){  
 line+=" "; // two spaces  
 }  
 }  
  
 i++; // increment i  
  
 // Store amended line in output file  
 writer.write(line);  
 writer.newLine();  
 // read next line  
 line = reader.readLine();  
 }  
 reader.close();  
 writer.close();  
 } catch (IOException e) {  
 e.printStackTrace();  
 }  
  
 }  
  
 static void retrieve(String inpFile) {  
 BufferedReader reader;  
 String bitString = "";  
  
 try {  
 reader = new BufferedReader(new FileReader(inpFile));  
 String line = reader.readLine();  
 while (line != null) {  
 // Your code starts here  
 if(line.contains(" "))bitString += "1"; // 2 spaces  
 else if(line.contains(" "))bitString += "0"; // 1 space  
 // System.out.println(line);  
 else break;  
 // read next line  
 line = reader.readLine();  
 }  
 reader.close();  
 } catch (IOException e) {  
 e.printStackTrace();  
 }  
  
 }  
}

Problem 2 code:

*/\*\*  
 \* CT255 - Assignment 4  
 \* Skeleton code for Steganography assignment.  
 \*  
 \** ***@author*** *Gavin Skehan  
 \** ***@version*** *1.0  
 \*/*import java.io.\*;  
  
public class Stegano1 {  
 */\*\*  
 \* Constructor for objects of class Stegano1  
 \*/* public Stegano1() {  
 }  
  
 public static void main(String[] args) {  
 String arg1, arg2, arg3, arg4;  
 Boolean err = false;  
  
 if (args != null && args.length > 1) { // Check for minimum number of arguments  
 arg1 = args[0];  
 arg2 = args[1];  
  
 if (arg2 == "") {  
 err = true;  
 } else if ((arg1 == "A") && (args.length > 3)) {  
 // Get other arguments  
 arg3 = args[2];  
 arg4 = args[3];  
 if (arg3 == "" || arg4 == "") {  
 err = true;  
 } else {  
 // Hide bitstring  
 *hide*(arg2, arg3, arg4);  
 }  
 } else if (arg1 == "E") {  
 // Extract bitstring from text  
 *retrieve*(arg2);  
 } else {  
 err = true;  
 }  
 } else {  
 err = true;  
 }  
  
 if (err == true) {  
 System.*out*.println();  
 System.*out*.println("Use: Stegano1 <A:E><Input File><OutputFile><Binstring>");  
 System.*out*.println("Example: Stegano1 A inp.txt out.txt 0010101");  
 System.*out*.println("Example: Stegano1 E inp.txt");  
  
 }  
 }  
  
 static void hide(String inpFile, String outFile, String bitString) {  
 //  
 BufferedReader reader;  
 BufferedWriter writer;  
  
  
 try {  
 reader = new BufferedReader(new FileReader(inpFile));  
 writer = new BufferedWriter(new FileWriter(outFile));  
 String line = reader.readLine();  
 int i = 0;  
 if ((bitString.length() % 2) != 0) bitString += "0";  
  
 while (line != null) {  
 // Your code starts here q1  
 if (i + 1 < bitString.length()) {  
 // Hiding bits as spaces at the end of the line  
  
 if (bitString.charAt(i) == 48 && bitString.charAt(i + 1) == 48) {  
 line += " ";  
 } else if (bitString.charAt(i) == 48 && bitString.charAt(i + 1) == 49) {  
 line += " ";  
 } else if (bitString.charAt(i) == 49 && bitString.charAt(i + 1) == 48) {  
 line += " ";  
 } else if (bitString.charAt(i) == 49 && bitString.charAt(i + 1) == 49) {  
 line += " ";  
 }  
 }  
 i += 2;  
 // Store amended line in output file  
 writer.write(line);  
 writer.newLine();  
 // read next line  
 line = reader.readLine();  
 }  
 reader.close();  
 writer.close();  
 }  
 catch(IOException e){  
 e.printStackTrace();  
 }  
  
 }  
  
  
  
  
 static void retrieve (String inpFile){  
 BufferedReader reader;  
 String bitString = "";  
  
 try {  
 reader = new BufferedReader(new FileReader(inpFile));  
 String line = reader.readLine();  
 while (line != null) {  
 // Your code starts here  
 // check for any of these sequences in the lines and adding it to the line  
 if (line.contains(" ")) bitString += "11";  
 else if (line.contains(" ")) bitString += "10";  
 else if (line.contains(" ")) bitString += "01";  
 else if (line.contains(" ")) bitString += "00";  
 // System.out.println(line);  
 else break; // no sequence found  
 // read next line  
 line = reader.readLine();  
 }  
 reader.close();  
 } catch (IOException e) {  
 e.printStackTrace();  
 }  
  
 }  
 }