Code

import java.io.File;

import java.io.FileInputStream;

import java.io.IOException;

import java.io.UnsupportedEncodingException;

import java.security.MessageDigest;

import java.security.NoSuchAlgorithmException;

public class lab12 {

public static void main(String[] args) {

String message="It was the best of times, it was the worst of times.\n";

String hashValue=hashString(message,"SHA-1");

File f1= new File("shattered-1.pdf");

File f2= new File("shattered-2.pdf");

String hashaValue=hashAFile(f1, "MD5");

String hashaValue2=hashAFile(f2, "MD5");

System.out.println(hashaValue+" \n"+hashaValue2);

}

public static String hashString(String message, String algorithm) {

byte[] hashedBytes=null;

try {

MessageDigest digest=MessageDigest.getInstance(algorithm);

hashedBytes=digest.digest(message.getBytes("UTF-8"));

} catch (NoSuchAlgorithmException e) {

e.printStackTrace();

} catch (UnsupportedEncodingException e) {

e.printStackTrace();

}

return bToH(hashedBytes);

}

public static String bToH(byte[] value) {

StringBuilder sb=new StringBuilder(value.length\*2);

for(byte b:value)

sb.append(String.format("%02x",b));

return sb.toString();

}

public static String hashAFile(File filename, String algorithm) {

byte[] hashedBytes=null;

try {

FileInputStream inStream= new FileInputStream(filename);

MessageDigest digest=MessageDigest.getInstance(algorithm);

byte []buffer=new byte[1024];

int bytesRead=-1;

while((bytesRead=inStream.read(buffer))!=-1) {

digest.update(buffer,0,bytesRead);

}

hashedBytes=digest.digest();

} catch (NoSuchAlgorithmException e) {

e.printStackTrace();

} catch (UnsupportedEncodingException e) {

e.printStackTrace();

} catch (IOException e) {

e.printStackTrace();

}

return bToH(hashedBytes);

}

}