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BEA-1851011

ASSIGNMENT: 3

Write a program in C++ or Java to implement SHA1 algorithm using libraries (API)

Code:

import java.security.DigestInputStream;

import java.security.DigestOutputStream;

import java.security.MessageDigest;

import java.security.Security;

import java.io.\*;

public class SHA1

{

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

{

FileInputStream fstream = new FileInputStream("textfile.txt");

DataInputStream in = new DataInputStream(fstream);

BufferedReader br= new BufferedReader(new InputStreamReader(in));

String str;

str = br.readLine();

byte[] input = str.getBytes();

System.out.println("input :" + new String(input));

MessageDigest hash = MessageDigest.getInstance("SHA1");

ByteArrayInputStream byteinstream= new ByteArrayInputStream(input);

DigestInputStream digestin = new DigestInputStream(byteinstream,hash);

ByteArrayOutputStream byteoutstream= new ByteArrayOutputStream();

int ch;

while((ch = digestin.read()) >=0 )

{

byteoutstream.write(ch);

}

byte[] newInput = byteoutstream.toByteArray();

System.out.println("in digest : " + new String(digestin.getMessageDigest().digest()));

byteoutstream = new ByteArrayOutputStream();

DigestOutputStream digestout = new DigestOutputStream(byteoutstream,hash);

digestout.write(newInput);

digestout.close();

System.out.println("out digest: "+ new String(digestout.getMessageDigest().digest()));

}

}

Output:

