**EX.No.8 SHA1 HASHING ALGORITHM**

**CODE:**

import java.math.BigInteger;

import java.security.MessageDigest;

import java.math.BigInteger;

import java.util.\*;

import java.security.NoSuchAlgorithmException;

public class SHA1 {

String message;

public String hash() throws NoSuchAlgorithmException

{

MessageDigest md = MessageDigest.getInstance("SHA-1");

byte[] messageDigest = md.digest(message.getBytes());

System.out.println("\nSHA1 Digest of "+ message + " (in Base64): " +Base64.getEncoder().encodeToString(messageDigest));

BigInteger no = new BigInteger(1, messageDigest);

String res = no.toString(16);

while (res.length() < 32) {

res = "0" + res;

}

return res;

}

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

{

Scanner sc = new Scanner(System.in);

System.out.println("\nSHA1 HASHING ALGORITHM");

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

SHA1 sha1 = new SHA1();

System.out.print("\nEnter the message: ");

sha1.message=sc.nextLine();

System.out.println("\nSHA1 Digest of "+ sha1.message + " (in hex): " +sha1.hash());

}

}

**OUTPUT:**

