**Practical no -8 Roll no -05,46**

import javax.crypto.Mac;

import javax.crypto.spec.SecretKeySpec;

public class hmacSha1

{

public static void main(String args[]) {

System.out.println(hmacSha1("mykey","helloworld"));

System.out.println(hmacSha256("mykey","helloworld"));

}

public static String hmacSha1(String KEY,String VALUE){

return hmacSha(KEY,VALUE,"hmacSha1");

}

public static String hmacSha256(String KEY,String VALUE){

return hmacSha(KEY,VALUE,"HmacSHA256");

}

private static String hmacSha(String KEY,String VALUE,String SHA\_TYPE)

{

try{

SecretKeySpec signingkey =new SecretKeySpec(KEY.getBytes("UTF-8"),SHA\_TYPE);

Mac mac =Mac.getInstance(SHA\_TYPE);

mac.init(signingkey);

byte[] rawHmac=mac.doFinal(VALUE.getBytes("UTF-8"));

byte[] hexArray={(byte)'0',(byte)'1',(byte)'2',(byte)'3',

(byte)'4',(byte)'5',(byte)'6',(byte)'7',

(byte)'8',(byte)'9',(byte)'a',(byte)'b',

(byte)'c',(byte)'d',(byte)'e',(byte)'f'};

byte[] hexChars=new byte[rawHmac.length\*2];

for(int j=0;j<rawHmac.length;j++)

{

int v=rawHmac[j]&0xFF;

hexChars[j\*2]=hexArray[v>>>4];

hexChars[j\*2+1]=hexArray[v & 0x0F];

}

return new String(hexChars);

}

catch(Exception e){

throw new RuntimeException(e);

}

}

}

**Output :**

**D:\TYCS\INS>javac hmacSha1.java**

**D:\TYCS\INS>java hmacSha1**

**74ae5a4a3d9996d5918defc2c3d475471bbf59ac**

**7fdfaa9c9c0931f52d9ebf2538bc99700f2e771f3af1c1d93945c2256c11aedd**