

Date:16/10/2020

Practical no 8**AIM:** Write a program to calculate HMAC-SHA1 Signature**Code:-**

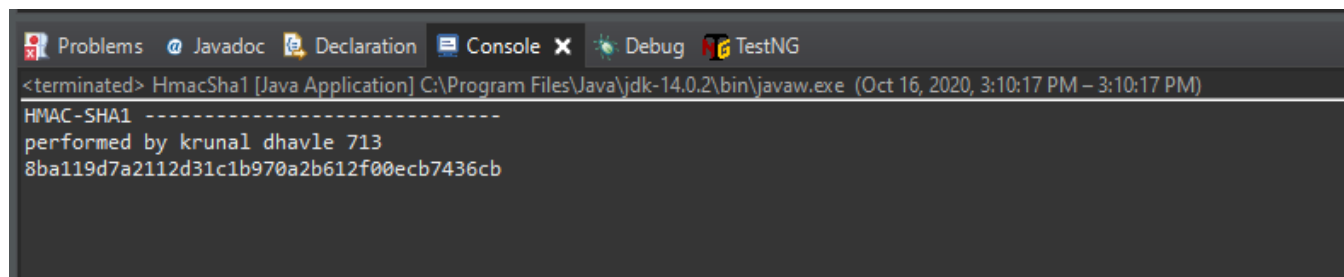
```
package prac8;
import java.util.Formatter;
import javax.crypto.*;
import javax.crypto.spec.SecretKeySpec;

public class HmacSha1 {
    private static String toHexString(byte[] bytes){
        Formatter formatter = new Formatter();
        for(byte b : bytes)
        {
            formatter.format("%02x" , b);
        }
        return formatter.toString();
    }

    public static String calculateHMAC(String data , String key) throws Exception
    {
        SecretKeySpec signingKey = new SecretKeySpec(key.getBytes() , "HmacSHA1");
        Mac mac = Mac.getInstance("HmacSHA1");
        mac.init(signingKey);
    }
}
```

```
        return toHexString(mac.doFinal(data.getBytes()));
    }

    public static void main(String[] args) throws Exception
    {
        String hmac = calculateHMAC("krunal", "dhavle");
        System.out.println("HMAC-SHA1 -----");
        System.out.println("performed by krunal dhavle 713");
        System.out.println(hmac);
    }
}
```

Output:-A screenshot of a Java IDE's console window. The title bar shows tabs for Problems, Javadoc, Declaration, Console, Debug, and TestNG. The console output shows the execution of a Java application named 'HmacSha1'. The output lines are: 'HMAC-SHA1 -----', 'performed by krunal dhavle 713', and the hexadecimal hash '8ba119d7a2112d31c1b970a2b612f00ecb7436cb'.

```
<terminated> HmacSha1 [Java Application] C:\Program Files\Java\jdk-14.0.2\bin\javaw.exe (Oct 16, 2020, 3:10:17 PM – 3:10:17 PM)
HMAC-SHA1 -----
performed by krunal dhavle 713
8ba119d7a2112d31c1b970a2b612f00ecb7436cb
```