Practical – 9

Aim: Write a program to generate SHA-1 hash.

Source Code:
```java
import java.math.BigInteger;
import java.security.MessageDigest;
import java.security.NoSuchAlgorithmException;
import java.util.Scanner;
public class Main{
    public static String encryptThisString(String input)
    {
        try {
            MessageDigest md = MessageDigest.getInstance("SHA-1");
            byte[] messageDigest = md.digest(input.getBytes());
            BigInteger no = new BigInteger(1, messageDigest);
            String hashtext = no.toString(16);
            while (hashtext.length() < 32)
            {
                hashtext = "0" + hashtext;
            }
            return hashtext;
        }

        catch (NoSuchAlgorithmException e)
        {
            throw new RuntimeException(e);
        }
    }

    // Driver code
    public static void main(String args[]) throws
                        NoSuchAlgorithmException
    {
        Scanner sc= new Scanner(System.in);
        System.out.print("Enter a string: ");
        String s1= sc.nextLine();
        System.out.println("\n" + s1 + " : " + encryptThisString(s1));
    }
}
```

<u>Output:</u>

```
C:\Users\Dell\Desktop\java1>java Main
Enter a string: hello world

hello world : 2aae6c35c94fcfb415dbe95f408b9ce91ee846ed
```