

**Roll No.- 17103011**

**Program: SHA-512**

**Program:**

```
import java.math.BigInteger;
import java.security.MessageDigest;
import java.security.NoSuchAlgorithmException;
import java.util.Scanner;

public class SHA {
    public static String encryptThisString(String input)
    {
        try {

            MessageDigest md = MessageDigest.getInstance("SHA-512");

            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);
        }
    }

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

        System.out.println("Enter string to Encrypt");

        Scanner in = new Scanner(System.in);
        String s = in.nextLine();

        System.out.println("Encrypted string is " + encryptThisString(s));

    }
}
```

## Output:

```
G:\>cd "g:\\" && javac SHA.java && java SHA
Enter string to Encrypt
ankitgoyal
Encrypted string is f143db129b368b164b38eb0d7e1c4df356ed00525aaf9535b9549988fe106ec1e7903c5b3b805f33cbc2627f28bfed8ae50429ede05b99b6f1f3f30
660a0d3d7
```