

1.1.1.2 Sample Java Code for hash generation

```
import java.io.UnsupportedEncodingException;
import java.security.InvalidKeyException;
import java.security.NoSuchAlgorithmException;
import javax.crypto.Mac;
import javax.crypto.spec.SecretKeySpec;
public class HashingAlgorithm {
/**
 * This method will generate key hash
 * @param input
 * @param strSecretKey
 * @return
 */
public static String GenerateHash(String input, String strSecretKey) {
String strHash = "";
try {
if (!IsValidString(input) || !IsValidString(strSecretKey)) {
return strHash;
}
byte[] convertedHashKey = new byte[strSecretKey.length() / 2];
for (int i = 0; i < strSecretKey.length() / 2; i++) {
convertedHashKey[i] =
(byte)Integer.parseInt(strSecretKey.substring(i * 2, (i*2)+2),16); //hexNumber
radix
}
strHash = hmacDigest(input.toString(), convertedHashKey,
"HmacSHA256");
} catch (Exception ex) {
strHash = "";
} return strHash.toUpperCase();
}
private static String hmacDigest(String msg, byte[] keyString, String algo) {
String digest = null;
try {
SecretKeySpec key = new SecretKeySpec(keyString, algo);
Mac mac = Mac.getInstance(algo);
mac.init(key);
byte[] bytes = mac.doFinal(msg.getBytes("UTF-8"));
StringBuffer hash = new StringBuffer();
for (int i = 0; i < bytes.length; i++) {
String hex = Integer.toHexString(0xFF & bytes[i]);
if (hex.length() == 1) {
hash.append('0');
} hash.append(hex);
} digest =
hash.toString();
} catch (UnsupportedEncodingException e) {
// logger.error("Exception occurred in hashing the pine payment gateway
request"+e);
} catch (InvalidKeyException e) {
// logger.error("Exception occurred in hashing the pine payment gateway
request"+e);
} catch (NoSuchAlgorithmException e) {
```

```
// logger.error("Exception occurred in hashing the pine payment gateway  
request"+e);  
} return digest;  
}  
public static boolean isValidString(String str){  
if(str != null && !"".equals(str.trim())){  
return true;  
} return false;  
}  
}
```

Using Merchant Secret Key(strSecretKey)and string(input) to generate a hash
string(hashString)