//AES Implementation in Java

import javax.crypto.Cipher;

import javax.crypto.KeyGenerator;

import javax.crypto.SecretKey;

import java.util.Base64;

public class AESExample {

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

String plainText = "Hello World";

// Generate AES key (128-bit)

KeyGenerator keyGen = KeyGenerator.getInstance("AES");

keyGen.init(128);

SecretKey secretKey = keyGen.generateKey();

// Encrypt

Cipher encryptCipher = Cipher.getInstance("AES");

encryptCipher.init(Cipher.ENCRYPT\_MODE, secretKey);

byte[] encryptedBytes = encryptCipher.doFinal(plainText.getBytes());

String encryptedText = Base64.getEncoder().encodeToString(encryptedBytes);

System.out.println("AES Encrypted Text: " + encryptedText);

// Decrypt

Cipher decryptCipher = Cipher.getInstance("AES");

decryptCipher.init(Cipher.DECRYPT\_MODE, secretKey);

byte[] decryptedBytes = decryptCipher.doFinal(encryptedBytes);

String decryptedText = new String(decryptedBytes);

System.out.println("AES Decrypted Text: " + decryptedText);

}

}

//RC4 Implementation in Java

import javax.crypto.Cipher;

import javax.crypto.KeyGenerator;

import javax.crypto.SecretKey;

import java.util.Base64;

public class RC4Example {

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

String plainText = "Hello World";

// Generate RC4 key (128-bit)

KeyGenerator keyGen = KeyGenerator.getInstance("RC4");

keyGen.init(128);

SecretKey secretKey = keyGen.generateKey();

// Encrypt

Cipher rc4 = Cipher.getInstance("RC4");

rc4.init(Cipher.ENCRYPT\_MODE, secretKey);

byte[] encryptedBytes = rc4.doFinal(plainText.getBytes());

String encryptedText = Base64.getEncoder().encodeToString(encryptedBytes);

System.out.println("RC4 Encrypted Text: " + encryptedText);

// Decrypt

rc4.init(Cipher.DECRYPT\_MODE, secretKey);

byte[] decryptedBytes = rc4.doFinal(encryptedBytes);

String decryptedText = new String(decryptedBytes);

System.out.println("RC4 Decrypted Text: " + decryptedText);

}

}



