PROGRAM:
AES.java

```
import java.io.UnsupportedEncodingException;
import java.security.MessageDigest;
import java.security.NoSuchAlgorithmException;
import java.util.Arrays;
import java.util.Base64;
import javax.crypto.Cipher;
import javax.crypto.spec.SecretKeySpec;


public class AES
{
   private static SecretKeySpec secretKey;
   private static byte[] key;
   public static void setKey(String myKey)
   {
      MessageDigest sha = null;
      try
      {
         key = myKey.getBytes("UTF-8");
         sha = MessageDigest.getInstance("SHA-1");
         key = sha.digest(key);
         key = Arrays.copyOf(key, 16);
         secretKey = new SecretKeySpec(key, "AES");
      }
      catch (NoSuchAlgorithmException e)
      {
         e.printStackTrace();
      }
      catch (UnsupportedEncodingException e)
      {
         e.printStackTrace();
      }
   }
   public static String encrypt(String strToEncrypt, String secret)
   {
      try
      {
```

```
            setKey(secret);
            Cipher cipher = Cipher.getInstance("AES/ECB/PKCS5Padding");
            cipher.init(Cipher.ENCRYPT_MODE, secretKey);
           return Base64.getEncoder().encodeToString(cipher.doFinal(strToEncr
ypt.getBytes("UTF-8")));
        }
        catch (Exception e)
        {
            System.out.println("Error while encrypting: " + e.toString());
        }
        return null;
    }

    public static String decrypt(String strToDecrypt, String secret)
    {
        try
        {
            setKey(secret);
           Cipher cipher = Cipher.getInstance ("AES/ECB/PKCS5PADDING");
            cipher.init(Cipher.DECRYPT_MODE, secretKey);
            return new String(cipher.doFinal(Base64.get
Decoder().decode(strToDecrypt)));
        }

        catch (Exception e)
        {
            System.out.println("Error while decrypting: " + e.toString());
        }
        return null;
    }


    public static void main(String[] args)
    {
        final String secretKey = "annaUniversity";
        String originalString = "www.annauniv.edu";
        String encryptedString = AES.encrypt(originalString, secretKey);
        String decryptedString = AES.decrypt(encryptedString, secretKey);
        System.out.println("URL Encryption Using AES Algorithm\n------ ");
        System.out.println("Original URL : " + originalString);
        System.out.println("Encrypted URL : " + encryptedString);
```

```
        System.out.println("Decrypted URL : " + decryptedString);
    }
}
```

OUTPUT:

URL Encryption Using AES Algorithm
Original URL : www.annauniv.edu
Encrypted URL : vibpFJW6Cvs5Y+L7t4N6YWWe07+JzS1d3CU2h3mEvEg=
Decrypted URL : www.annauniv.edu