

RSA

```
Imports System.Security.Cryptography
Imports System.Text

Dim textbytes, encryptedtextbytes As Byte()
Dim rsa As New RSACryptoServiceProvider
Dim encoder As New UTF8Encoding
```

Button- التشفير

```
Dim TexttoEncrypt As String = TextBox1.Text
textbytes = encoder.GetBytes(TexttoEncrypt)
encryptedtextbytes = rsa.Encrypt(textbytes, True)
TextBox2.Text = Convert.ToBase64String(encryptedtextbytes)
```

Button- فك التشفير

```
textbytes = rsa.Decrypt(encryptedtextbytes, True)
TextBox1.Text = encoder.GetString(textbytes)
```

SHA-1

`Imports System.Security.Cryptography`

`Imports System.Text`

Button- التشفير

```
Select Case Trim(ComboBox1.Text)
    Case "SHA1"
        TextBox2.Text =
GetSHA1Data(Encoding.[Default].GetBytes(TextBox1.Text))
End Select
ListBox1.Items.Clear()
For i = 0 To Len(TextBox2.Text) - 2 Step 2
    ListBox1.Items.Add(TextBox2.Text(i) & TextBox2.Text(i + 1))
Next
```

```
Public Sub New(_KEY As String)
```

```
    KeyStr = _KEY
```

```
End Sub
```

```
Private KeyValue As String
```

```
Public Property KeyStr() As String
```

```
    Get
```

```
        Return KeyValue
```

```
    End Get
```

```
    Set(ByVal value As String)
```

```
        KeyValue = value
```

```
    End Set
```

```
End Property
```

```

Function Encryption(ByVal Path As String) As Byte()
    Dim input As Byte() = File.ReadAllBytes(Path)
    Dim AES As New System.Security.Cryptography.RijndaelManaged
    Dim SHA256 As New System.Security.Cryptography.SHA256Cng
    Dim ciphertext As String = ""
    Try
        AES.Key =
SHA256.ComputeHash(System.Text.ASCIIEncoding.ASCII.GetBytes(KeyStr))
        AES.Mode = Security.Cryptography.CipherMode.ECB
        Dim DESEncrypter As System.Security.Cryptography.ICryptoTransform
= AES.CreateEncryptor
        Dim Buffer As Byte() = input
        Return DESEncrypter.TransformFinalBlock(Buffer, 0, Buffer.Length)
    Catch ex As Exception
    End Try
End Function

```

```

Function Decryption(ByVal Path As String) As Byte()
    Dim input As Byte() = File.ReadAllBytes(Path)
    Dim AES As New System.Security.Cryptography.RijndaelManaged
    Dim SHA256 As New System.Security.Cryptography.SHA256Cng
    Try
        AES.Key =
SHA256.ComputeHash(System.Text.ASCIIEncoding.ASCII.GetBytes(KeyStr))
        AES.Mode = Security.Cryptography.CipherMode.ECB
        Dim DESDecrypter As System.Security.Cryptography.ICryptoTransform
= AES.CreateDecryptor
        Dim Buffer As Byte() = input
        Return DESDecrypter.TransformFinalBlock(Buffer, 0, Buffer.Length)
    Catch ex As Exception
    End Try
End Function

```

SHA-2

```
Imports System.Security.Cryptography
Imports System.Text
```

Button- اضافة ملفات

```
Dim OFP As New OpenFileDialog
OFP.Multiselect = True
OFP.Filter = "Application|*.exe|Icon|*.ico|Image|*.jpg|PNG|*.PNG|PDF|*.PDF"
If OFP.ShowDialog = Windows.Forms.DialogResult.OK Then
    For Each F In OFP.FileNames
        Dim File = New FileInfo(F)
        LstFiles.Add(File)
        CheckedListBoxListFiles.Items.Add(File.Name)
    Next
End If
```

Button- التشفير

```
Dim Th As New Threading.Thread(AddressOf Encrypt)
Th.Start()
```

Button- فك التشفير

```
Dim Th As New Threading.Thread(AddressOf Decrypt)
Th.Start()
```

```
Sub Encrypt()
```

```
    Button3.Enabled = False
    Button2.Enabled = True
```

```
    For i = 0 To LstFiles.Count - 1
```

```
        Try
```

```
            Dim FileEncrypted =
EncryptDecryptFiles.Encryption(LstFiles.Item(i).FullName)
```

```
            If FileEncrypted.Length > 0 Then
```

```

        My.Computer.FileSystem.WriteAllBytes(LstFiles.Item(i).FullName,
FileEncrypted, False)

        CheckedListBoxListFiles.SetItemCheckState(i, CheckState.Checked)

        CheckedListBoxListFiles.SetSelected(i, True)

        Label2.Text = "بنجاح الملف تشفير تم"

    End If

    Catch ex As Exception

    End Try

    Threading.Thread.Sleep(100)

Next
End Sub

Sub Decrypt()

    Button3.Enabled = True
    Button2.Enabled = False

    For i = 0 To LstFiles.Count - 1

        Try

            Dim FileEncrypted =
EncryptDecryptFiles.Decryption(LstFiles.Item(i).FullName)

            If FileEncrypted.Length > 0 Then

                My.Computer.FileSystem.WriteAllBytes(LstFiles.Item(i).FullName,
FileEncrypted, False)

                CheckedListBoxListFiles.SetItemCheckState(i, CheckState.Checked)

                CheckedListBoxListFiles.SetSelected(i, True)

                Label2.Text = "بنجاح الملف تشفير فك تم"
            End If
        Catch ex As Exception
        End Try
        Threading.Thread.Sleep(100)
    Next
End Sub

```

```

Function GetSHA1Data(ByVal data As Byte()) As String
    'create new instance of md5
    Dim sha As SHA1 = SHA1.Create()
    'convert the input text to array of bytes
    Dim hashData As Byte() = sha.ComputeHash(data)
    'create new instance of StringBuilder to save hashed data
    Dim returns As New StringBuilder()
    'loop for each byte and add it to StringBuilder
    For i As Integer = 0 To hashData.Length - 1
        returns.Append(hashData(i).ToString("x2"))
    Next
    ' return hexadecimal string
    Return returns.ToString()
End Function

```

```

Function ValidateSHA1Data(ByVal inputData As Byte(), ByVal storedHashData
As String) As Boolean
    'hash input text and save it string variable
    Dim getHashInputData As String = GetSHA1Data(inputData)
    If String.Equals(getHashInputData, storedHashData) Then
        Return True
    Else
        Return False
    End If
End Function

```