

Assembly : Shows how to generate a .NET public-key private-key file and sign an assembly with it.

❖ Assembly contains

1. Name
2. Version
3. Public key
4. Culture

❖ .Net Assembly Public and private key

- Sn -k KeyPair.snk
 - Will generate public and private key in .snk file
 - It Will globally unique
- Sn -p KeyPair.snk MyPubKey.pubkey
 - Extract public key form keypair.snk to MyPubKey.pubkey
 - O/P = Public key written to myPublicKey.pubkey
- Sn -tp MyPubKey.pubkey
 - Show public key

Public key (hash algorithm: sha1):

00240000048000000940000000602000000240000525341310004000001000100c5
a609d21c6cf32cf9d0db8b1c513e430a5d2704a7e4938d49dc2f6d76cefafe7691f119
637b779c4e90d72711f2fc6dd33f1a15118b29af8d3fb2e4985915d85aa5f5352fe8b4
488a82e97ed7417aa938773f5a8435f057e6f1c336a76c131fa1f4daec7979598f8c5
f1f1ca896a884b5c66a9c7e41620831de1634a0c22ea

Public key token is f4948c95b5493414

➤ Write Code

```
○ using System;  
○ using System.Reflection;  
○  
○ [assembly: AssemblyVersion("1.0.0.0")]  
○ public class Play  
○ {  
○     public static void Run()  
○     {  
○         Console.WriteLine("In Fun V1 ");  
○     }  
○ }  
○  
○  
○ //public class Program  
○ //{
```

```

○ // static void Main(string[] args)
○ // {
○ //     Play.Run();
○ // }
○ //

```

➤ Compile

➤ csc /keypair.snk /t:library /out:Game.dll Program.cs

➤ Game.dll will generate

- 10-11-2023 13:19 4,096 **Game.dll**
- 10-11-2023 13:15 596 keypair.snk
- 10-11-2023 13:07 249 KeyTask.csproj
- 10-11-2023 13:07 1,119 KeyTask.sln
- 10-11-2023 13:17 160 myPublicKey.pubkey

➤ Again Compile with commenting **Play Class** and uncomment rest

```

// [assembly: AssemblyVersion("1.0.0.0")]
// public class Play
// {
//     public static void Run()
//     {
//         Console.WriteLine("In Fun V1 ");
//     }
// }

public class Program
{
    static void Main(string[] args)
    {
        Play.Run();
    }
}

```

➤ Csc /r:Game.dll Program.cs

Will generate .exe file

Run

O/p : In run v1

➤ Test / Tamper

➤ Comment program and change the body of Run()

```

[assembly: AssemblyVersion("1.0.0.0")]
public class Play
{
    public static void Run()
    {
        Console.WriteLine("In Fun V1 virus ");
    }
}

```

```
//public class Program
//{
//    static void Main(string[] args)
//    {
//        Play.Run();
//    }
}
```

- Generate new .dll without our private .snk file
 - csc /t:library /out:Game.dll Program.cs
- This Will Override the old Game.dll
- But our .exe file is linked with old Game.dll file
- Hence when we run the .exe file will give exception

- *C:\Users\devic\Desktop\shubhamsalekar\aspDotNet\KeyTask>csc/t:library/out:Game.dllProgram.cs*
 Microsoft (R) Visual C# Compiler version 4.6.0-3.23259.8 (c3cc1d0c)
 Copyright (C) Microsoft Corporation. All rights reserved.

- *C:\Users\devic\Desktop\shubham-salekar\aspDotNet\KeyTask>Program.exe*
 Unhandled Exception: System.IO.FileLoadException: Could not load file or assembly 'Game, Version=1.0.0.0, Culture=neutral, **PublicKeyToken=f4948c95b5493414**' or one of its dependencies. The **located assembly's manifest definition does not match the assembly reference.** (Exception from HRESULT: 0x80131040)
 at Program.Main(String[] args)

Link : [[Playlist](#)] , [[Specific on .snk file](#)]