Lab1

Aim of Lab: To understand Single and Multifile assembly.

1.) Create assembly calc.dll which contains function to add two numbers. Create program.cs which contains main method and uses calc.dll file to perform addition of two numbers.

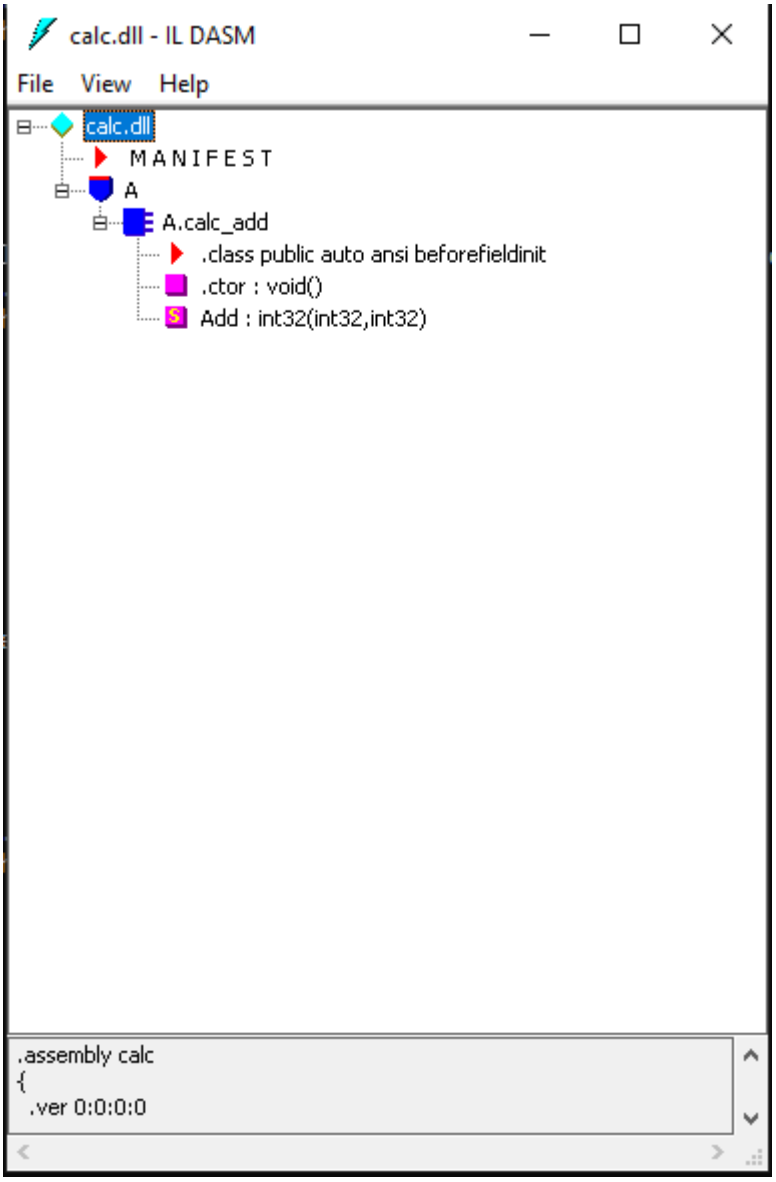
Ans:

calc.cs:

```
using System;

namespace A{
    public class calc_add{
        public static int Add(int a,int b){
            return a+b;
        }
    }
}
```

calc.dll:



program.cs

```
using System;

using A;

namespace program{
    public class program{
        public static int Main(){
            Console.WriteLine(calc_add.Add(9,12));
            return 0;
        }
    }
}
```

Command Line Instructions:

```
E:\WDDN Lab\Lab1>cd Q1

E:\WDDN Lab\Lab1\Q1>csc /t:library calc.cs
Microsoft (R) Visual C# Compiler version 3.8.0-5.20604.10 (9ed4b774)
Copyright (C) Microsoft Corporation. All rights reserved.


E:\WDDN Lab\Lab1\Q1>ildasm calc.dll

E:\WDDN Lab\Lab1\Q1>csc /r:calc.dll program.cs
Microsoft (R) Visual C# Compiler version 3.8.0-5.20604.10 (9ed4b774)
Copyright (C) Microsoft Corporation. All rights reserved.


E:\WDDN Lab\Lab1\Q1>
```

Output:

```
E:\WDDN Lab\Lab1\Q1>program.exe
21

E:\WDDN Lab\Lab1\Q1>
```

2.) Create assembly calc.dll using two netmodule files. Create program.cs which contains main method and uses calc.dll file to perform addition and multiplication of two numbers.

Ans.)

add.cs:

```cs
using System;

namespace A{
    public class calc_add{
        public static int Add(int a,int b){
            return a+b;
        }
    }
}
```

mul.cs:

```
using System;

namespace M{
    public class calc_mul{
        public static int Mul(int a,int b){
            return a*b;
        }
    }
}
```

calc.dll:

program.cs:

```
using System;
using A;
using M;

namespace program{
    public class program{
        public static int Main(){
            Console.WriteLine(calc_add.Add(9,12));
            Console.WriteLine(calc_mul.Mul(9,12));
            return 0;
```

```
        }
    }
}
```

Command Line Instructions:

```
E:\WDDN Lab\Lab1>cd Q2

E:\WDDN Lab\Lab1\Q2>csc /t:module add.cs
Microsoft (R) Visual C# Compiler version 3.8.0-5.20604.10 (9ed4b774)
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E:\WDDN Lab\Lab1\Q2>csc /t:module mul.cs
Microsoft (R) Visual C# Compiler version 3.8.0-5.20604.10 (9ed4b774)
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E:\WDDN Lab\Lab1\Q2>al /t:library add.netmodule mul.netmodule /out:calc.dll
Microsoft (R) Assembly Linker version 14.8.3928.0
Copyright (C) Microsoft Corporation. All rights reserved.


E:\WDDN Lab\Lab1\Q2>ildasm calc.dll

E:\WDDN Lab\Lab1\Q2>csc /r:calc.dll program.cs
Microsoft (R) Visual C# Compiler version 3.8.0-5.20604.10 (9ed4b774)
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E:\WDDN Lab\Lab1\Q2>
```

Output:

```
E:\WDDN Lab\Lab1\Q2>program.exe
21
108

E:\WDDN Lab\Lab1\Q2>
```