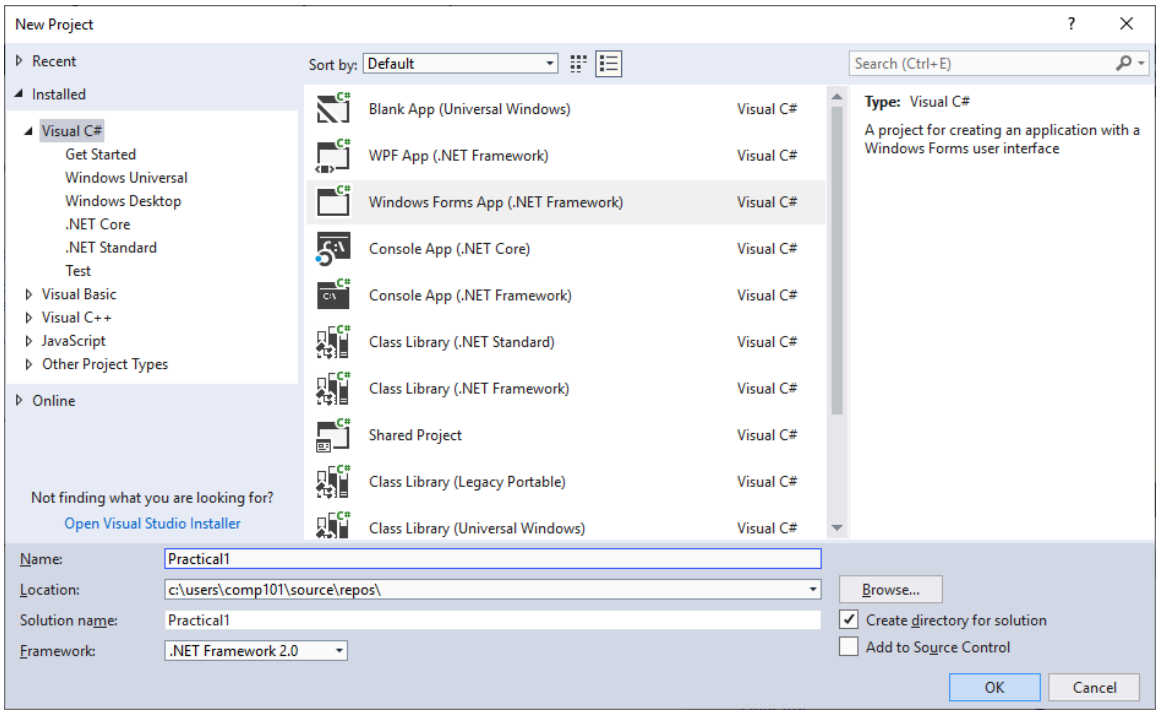
Practical no.1

AIM : Set up Direct X 11,Window Frame work and Initialize Direct3D Device.

DirectX is an application program interface (API) for creating and managing graphic images and multimedia effects in applications such as games or active Web pages that will run in Microsoft's Windows operating systems.

Initailize Window :

Open visual studio : File -> New -> Project -> Visualc# -> Select Window From Application Framework : .Net Framework2.0 .



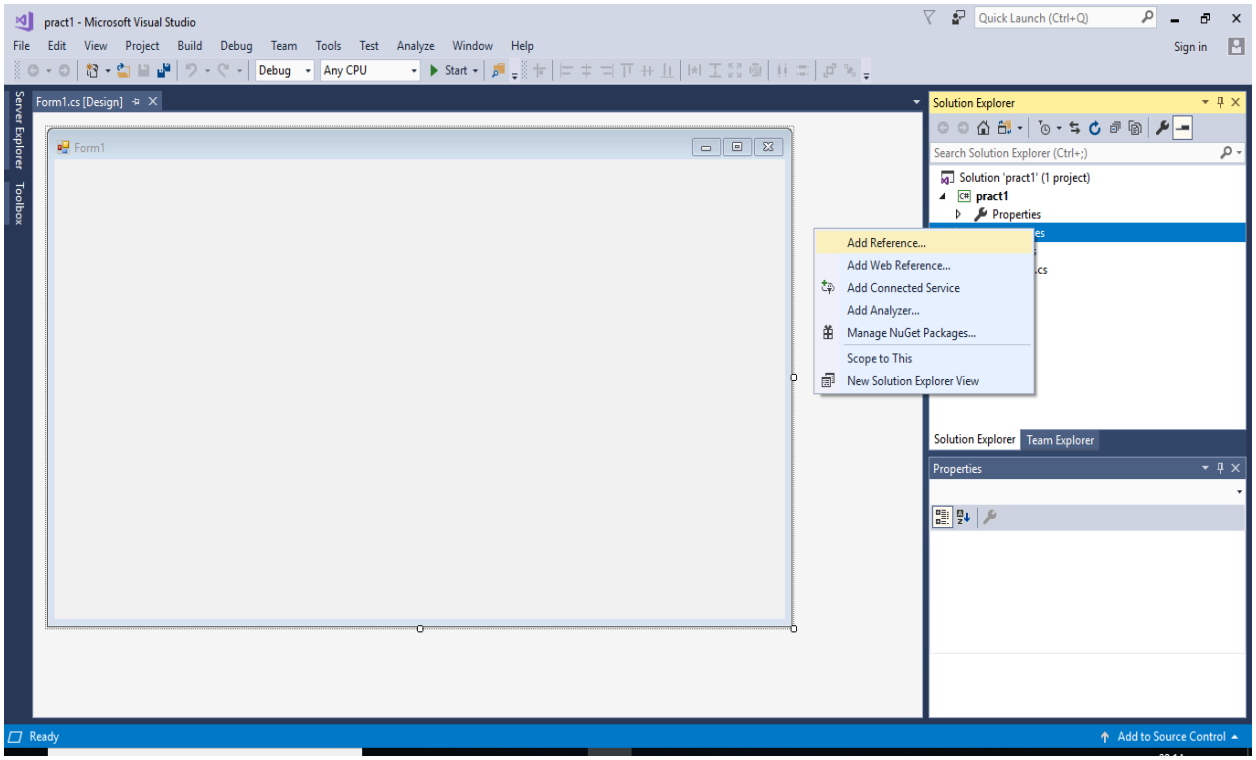
Add References :

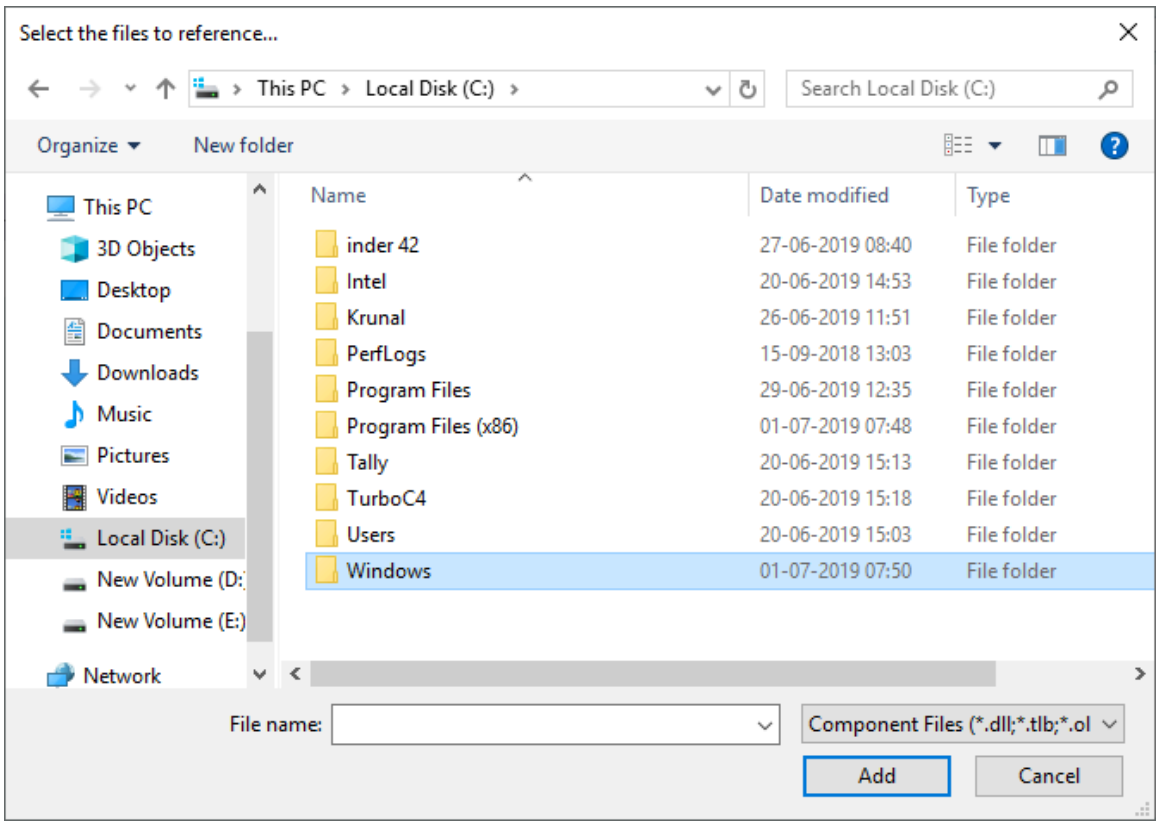
Right Click on References -> Add References -> Browse -> Click on Browse Button Go to C -> Windows -> Microsoft.Net folder >>>Select the following files :-

>Direct 3D.dll(3rd File)

>Direct 3D.dll(4th File)

>Direct X.dll(Last File)


pract1 - Microsoft Visual Studio
File Edit View Project Build Debug Team Tools Test Analyze Window Help
Debug
Any CPU
Start
Form1.cs [Design]
Form1
Server Explorer
Toolbox
Solution Explorer
Search Solution Explorer (Ctrl+;)
Solution 'pract1' (1 project)
pract1
Properties
Add Reference...
Add Web Reference...
Add Connected Service
Add Analyzer...
Manage NuGet Packages...
Scope to This
New Solution Explorer View
Solution Explorer
Team Explorer
Properties
Ready
Add to Source Control


Select the files to reference...
This PC
Local Disk (C:)
Search Local Disk (C:)
Organize
New folder
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
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inder 42 27-06-2019 08:40 File folder
Intel 20-06-2019 14:53 File folder
Krunal 26-06-2019 11:51 File folder
PerfLogs 15-09-2018 13:03 File folder
Program Files 29-06-2019 12:35 File folder
Program Files (x86) 01-07-2019 07:48 File folder
Tally 20-06-2019 15:13 File folder
TurboC4 20-06-2019 15:18 File folder
Users 20-06-2019 15:03 File folder
Windows 01-07-2019 07:50 File folder
File name:
Component Files (*.dll;*.tlb;*.ol
Add
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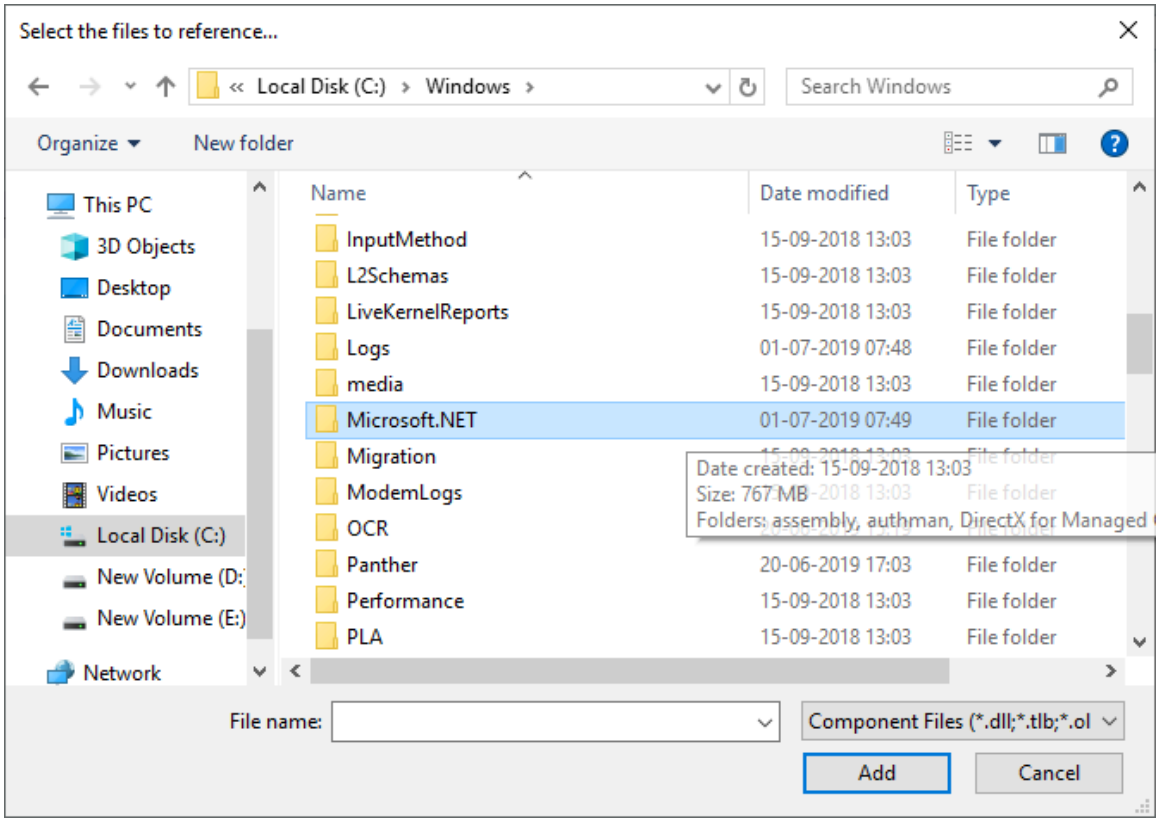
Select the files to reference...
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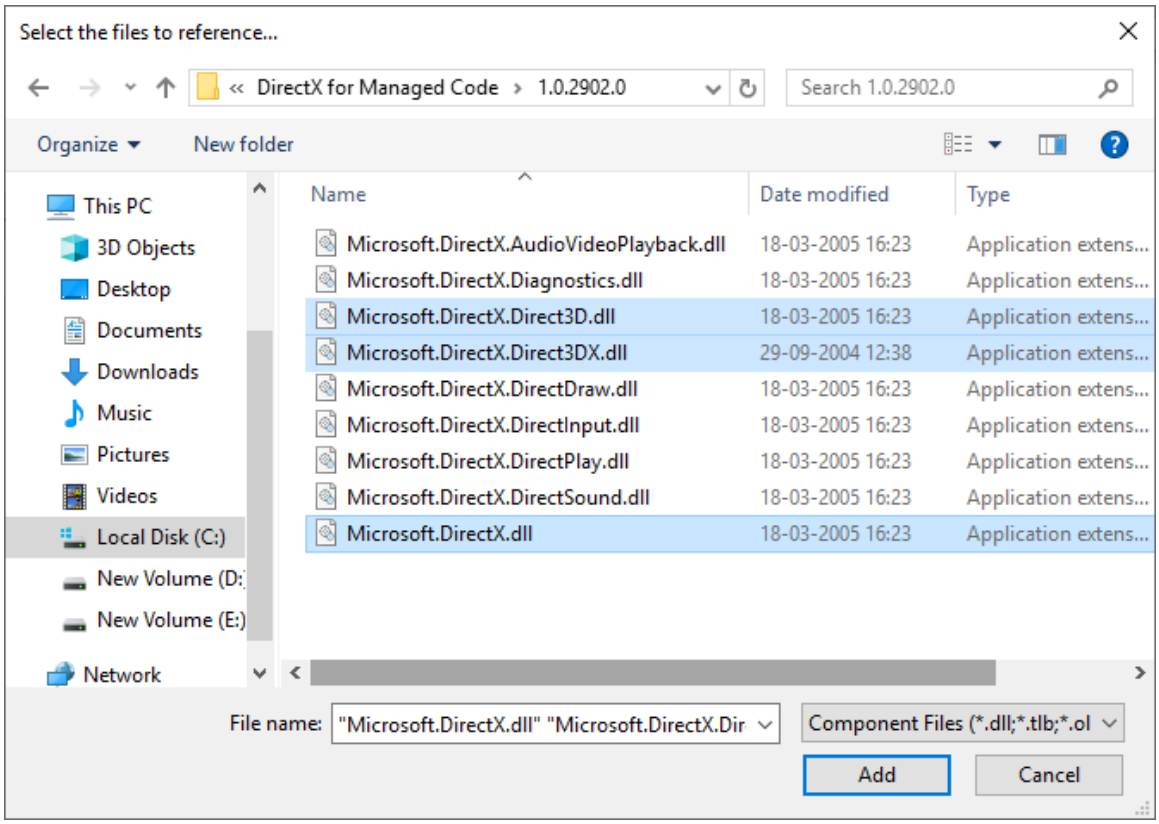
InputMethod 15-09-2018 13:03 File folder
L2Schemas 15-09-2018 13:03 File folder
LiveKernelReports 15-09-2018 13:03 File folder
Logs 01-07-2019 07:48 File folder
media 15-09-2018 13:03 File folder
Microsoft.NET 01-07-2019 07:49 File folder
Migration
ModemLogs
OCR
Panther 20-06-2019 17:03 File folder
Performance 15-09-2018 13:03 File folder
PLA 15-09-2018 13:03 File folder
Date created: 15-09-2018 13:03
Size: 767 MB
Folders: assembly, authman, DirectX for Managed
File name:
Component Files (*.dll;*.tlb;*.ol
Add
Cancel


Select the files to reference...
« DirectX for Managed Code › 1.0.2902.0
Search 1.0.2902.0
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Microsoft.DirectX.AudioVideoPlayback.dll 18-03-2005 16:23 Application extens...
Microsoft.DirectX.Diagnostics.dll 18-03-2005 16:23 Application extens...
Microsoft.DirectX.Direct3D.dll 18-03-2005 16:23 Application extens...
Microsoft.DirectX.Direct3DX.dll 29-09-2004 12:38 Application extens...
Microsoft.DirectX.DirectDraw.dll 18-03-2005 16:23 Application extens...
Microsoft.DirectX.DirectInput.dll 18-03-2005 16:23 Application extens...
Microsoft.DirectX.DirectPlay.dll 18-03-2005 16:23 Application extens...
Microsoft.DirectX.DirectSound.dll 18-03-2005 16:23 Application extens...
Microsoft.DirectX.dll 18-03-2005 16:23 Application extens...
File name: "Microsoft.DirectX.dll" "Microsoft.DirectX.Dir
Component Files (*.dll;*.tlb;*.ol
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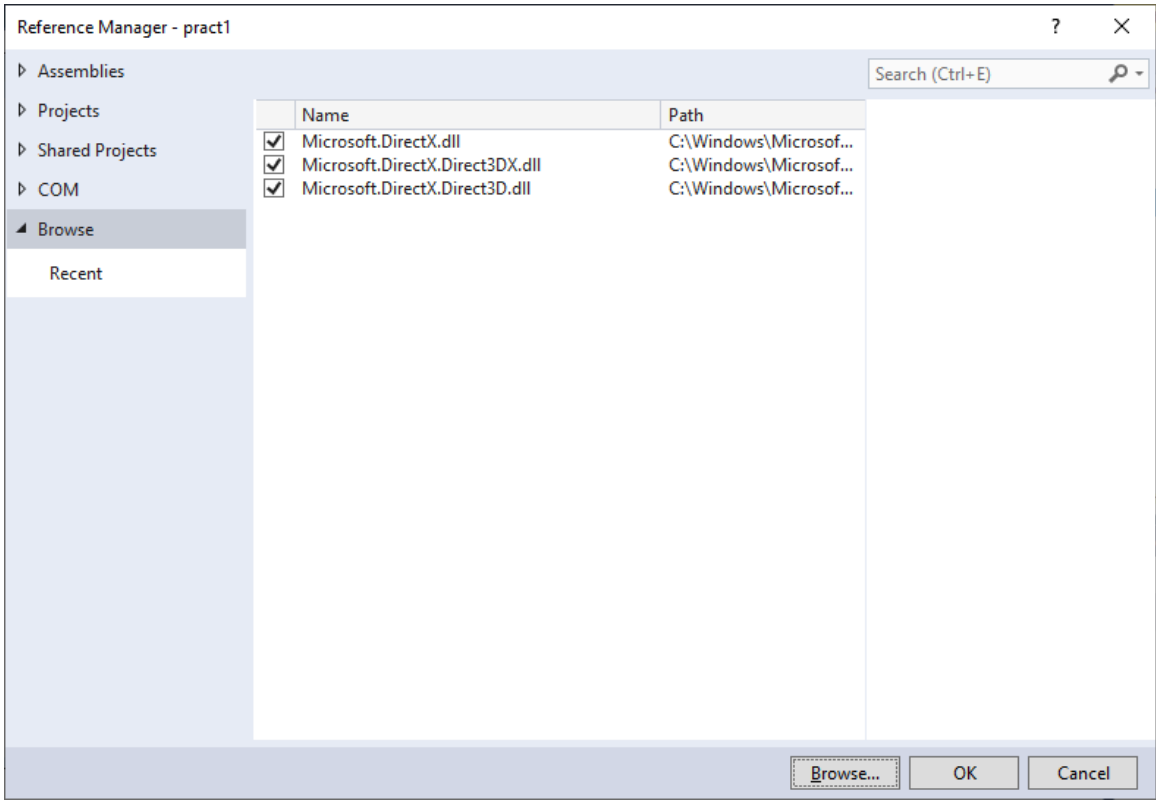
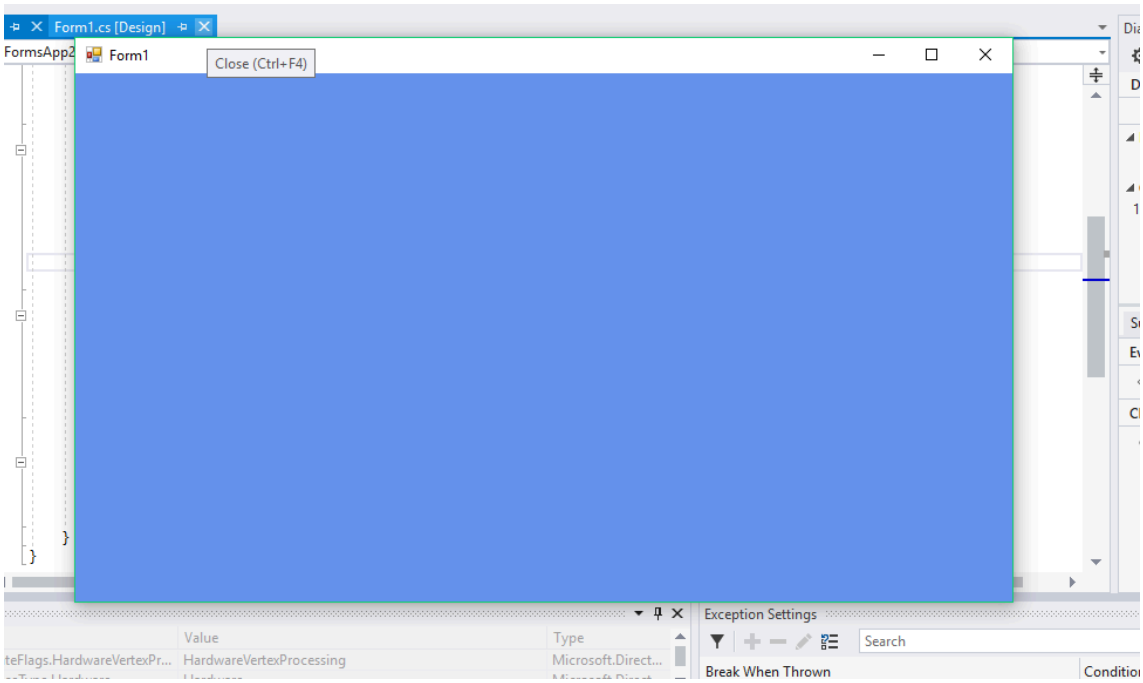
Cancel




```
Using System.Collections.Generic;
Using System.ComponentModel;
Using System.Data;
Using System.Drawing;
Using System.Text;
Using System.Windows.Forms;
Using Microsoft.DirectX;
Using  Microsoft.DirectX.Direct3D;
namespace GP_P1
{
public partial class Form1 : Form
   {
      Microsoft.DirectX.Direct3D.Device device;
public Form1()
      {
InitializeComponent();
InitDevice();
      }
public void InitDevice()
      {
PresentParameterspp = new PresentParameters();
pp.Windowed = true;
pp.SwapEffect = SwapEffect.Discard;
```

```
device = new Device(0, DeviceType.Hardware, this, CreateFlags.HardwareVertexProcessing,
pp);
        }
private void Render()
        {
          device.Clear(ClearFlags.Target, Color.Orange, 0, 1);
          device.Present();
        }
private void Form1_Paint(object sender, PaintEventArgs e)
        {
Render();
        }
    }
}
```



AIM: **Loading models into DirectX 11 and rendering.**

1) After completing the steps from the initialization file(“base setup.pdf”), now open “Form1.cs” file in your project, and code the part where it is commented as //OUR CODE

-----Form1.cs------

```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;
using Microsoft.DirectX; //OUR CODE
using Microsoft.DirectX.Direct3D; //OUR CODE
namespace p9
Microsoft.DirectX.Direct3D.Device device; //OUR CODE
Microsoft.DirectX.Direct3D.Texture texture; //OUR CODE
Microsoft.DirectX.Direct3D.Font font; //OUR CODE
public Form1()
{
InitializeComponent();
InitDevice(); //OUR CODE
InitFont(); //OUR CODE
LoadTexture(); //OUR CODE
}
private void InitFont() //OUR CODE
{
System.Drawing.Font f = new System.Drawing.Font("Arial", 16f,FontStyle.Regular);
font = new Microsoft.DirectX.Direct3D.Font(device, f);
}
private void LoadTexture() //OUR CODE
{
texture = TextureLoader.FromFile(device, "D:\\beach.jpg",  400, 400, 1, 0,
Format.A8B8G8R8,Pool.Managed, Filter.Point, Filter.Point, Color.Transparent.ToArgb());
}
private void InitDevice() //OUR CODE
{
PresentParameters pp = new PresentParameters();
pp.Windowed = true;
pp.SwapEffect = SwapEffect.Discard;
device = new Device(0, DeviceType.Hardware, this,
```

```
CreateFlags.SoftwareVertexProcessing, pp);
}
private void Render() //OUR CODE
{
device.Clear(ClearFlags.Target, Color.Cyan, 0, 1);
device.BeginScene();
using (Sprite s = new Sprite(device))
{
s.Begin(SpriteFlags.AlphaBlend);
s.Draw2D(texture,, new Rectangle(0, 0,device.Viewport.Width, device.Viewport.Height),new
sizeF(), new Point(0, 0), 0f, new Point(0, 0),Color.White);
font.DrawText(s, "GAME PROGRAMMING", new Point(0, 0), Color.Black);
s.End();
}
device.EndScene();
device.Present();
}
private void Form1_Paint(object sender, PaintEventArgs e)
{
Render(); //OUR CODE
}
}
}
```