Practical no 6

AIM: Specular Lightning (Programmable Spot Lightning using Direct3D 11)

Steps:-

1. Create a new project and select a windows form application(.Net Framework 2.0-3.5).

2. Right click on the properties → click on open → click build → select platform target → x86 or add new

3. Click on view code on form 1(design) or press F7.

4. Go to the solution explorer → right click on project name → select add reference .

5. Click on browse and add the required dll files.

6. Code the required files.

7. Add the paint method for changing the appearance .

8. Change the window name and icon if possible.

9. Disable the Exception Settings option such as LoaderLock.

10. Run the app.

Code:-

Program.cs file

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Windows.Forms;
using Microsoft.DirectX.Direct3D;

namespace WindowsFormsApp6
{
    static class Program
    {

        [STAThread]
        static void Main()
        {
            Application.EnableVisualStyles();
            Application.SetCompatibleTextRenderingDefault(false);
            Application.Run(new Form1());
        }
    }
}
```

Form1.cs file

```csharp
using System;
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 WindowsFormsApp12
{
    public partial class Form1 : Form
    {

        Microsoft.DirectX.Direct3D.Device device;
        Microsoft.DirectX.Direct3D.Texture texture;
        Microsoft.DirectX.Direct3D.Font font;

        public Form1()
        {
            InitializeComponent();
            InitDevice();
            InitFont();
            InitTexture();
        }
        private void InitFont()
        {
            System.Drawing.Font f = new System.Drawing.Font("Arial", 16f, FontStyle.Regular);
            font = new Microsoft.DirectX.Direct3D.Font(device, f);
        }
        private void InitTexture()
        {
            texture = TextureLoader.FromFile(device, "E:\\tycs\\gp prac\\prac6
vscode\\pic.jpg", 400, 400, 1, 0, Format.A8B8G8R8, Pool.Managed, Filter.Point, Filter.Point,
Color.Transparent.ToArgb());

        }
        private void InitDevice()
        {
            PresentParameters pp = new PresentParameters();
            pp.Windowed = true;
            pp.SwapEffect = SwapEffect.Discard;

            device = new Device(0, DeviceType.Hardware, this, CreateFlags.HardwareVertexPro-
cessing, pp);
        }

        private void Render()
        {
            device.Clear(ClearFlags.Target, Color.CornflowerBlue, 0, 1);
            device.BeginScene();

            using (Sprite s = new Sprite(device))
            {
```

```
                s.Begin(SpriteFlags.AlphaBlend);

                //s.Draw2D(texture, new Rectangle(0, 0, 0, 0), new Rectangle(0, 0, 0, 0), new
Point(0, 0), 0f, new Point(0, 0), 1);

                s.Draw2D(texture, new Point(0, 0), 0.0f, new Point(0, 0), Color.White);

                font.DrawText(s, "krunal Dhavle 713", new Point(0, 0), Color.White);
                s.End();
            }
            device.EndScene();
            device.Present();
        }
        private void Form1_Load(object sender, EventArgs e)
        {

        }
        private void Form1_Paint(object sender, PaintEventArgs e)
        {
            Render();
        }
    }
}
```

Output: