**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**

|  |
| --- |
| 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.HardwareVertexProcessing, 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:**

