Date
24-07-21

Neeraj Appani

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Practical 1

Aim: Setup Direct X11, Window framework and initialize 3D device.

Description - 1) This process includes creating the object, setting the presentation parameters, and finally creating the Direct 3D device

2) The preceding code sample relies upon a Present Parameters object that is used to set the windows display characteristics

3) For example, by setting the Windowed property to true, the size of the window displayed is less than full screen. This default small-window format has no menu or child windows, but it includes minimize, Maximize, and Close buttons common to windowed applications. In the case the ability to quickly swap buffers into system memory is disabled with the SwapEffect.Discard flag

4) If the windowed property is instead false, then the created window is placed above all non topmost windows and should stay above them, even when the window is deactivated

5) The final setups step in the initialization procedure is to create Direct3D device. In this example the flag input to the device (Int 32, DeviceType, control, CreateFlags, PresentParameters) specify that a hardware device is preferred, and that vertex processing is to be done in software

6) Note that if we tell the system to use hardware vertex processing by specifying CreateFlag

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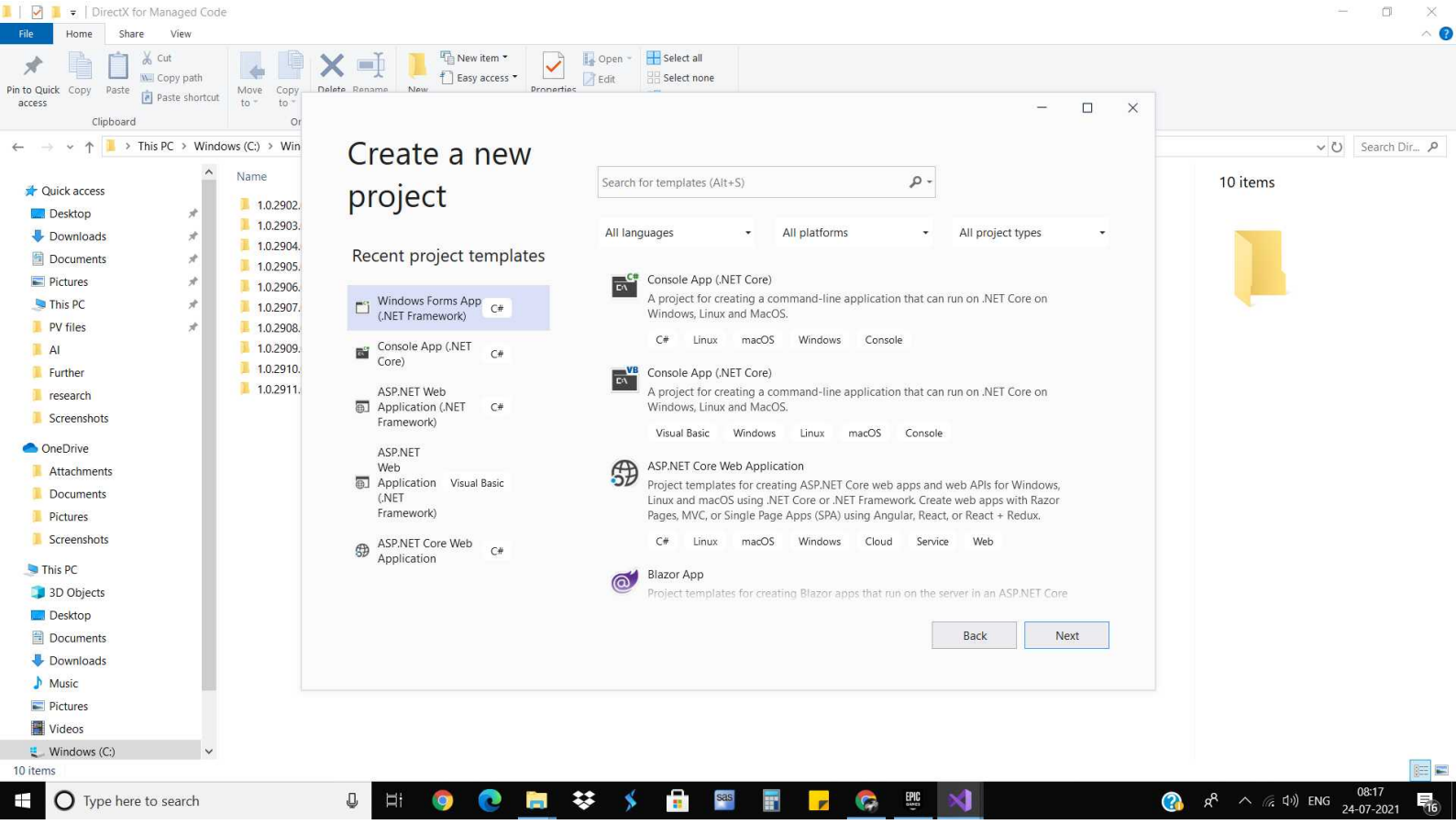
Hardware Vertex Processing, we will see a significant performance gain on video cards that support hardware vertex processing.

2) First the viewport (the open window) is set to be a uniform blue color with the Device.Clear method


DirectX for Managed Code
File
Home
Share
View
Pin to Quick access
Copy
Paste
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Copy path
Paste shortcut
Clipboard
Move to
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New
New item
Easy access
Properties
Open
Edit
Select all
Select none
This PC
Windows (C:)
Search Dir...
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Documents
Pictures
This PC
PV files
AI
Further
research
Screenshots
OneDrive
Attachments
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10 items
10 items
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C# Linux macOS Windows Cloud Service Web
Blazor App
Project templates for creating Blazor apps that run on the server in an ASP.NET Core
Back
Next
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ENG
08:17
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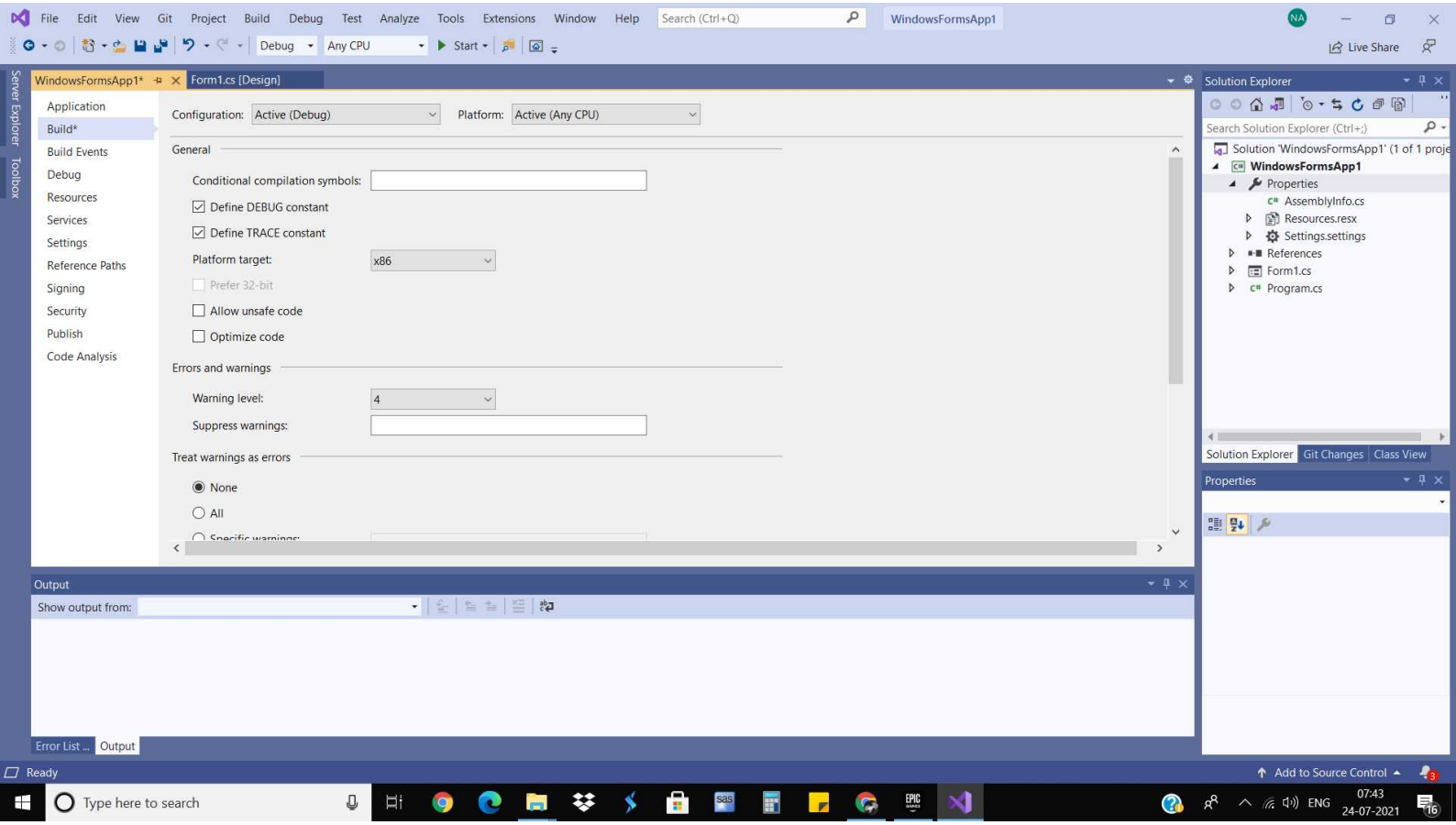
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
Search (Ctrl+Q)
WindowsFormsApp1
Debug
Any CPU
Start
Live Share
WindowsFormsApp1*
Form1.cs [Design]
Application
Build*
Build Events
Debug
Resources
Services
Settings
Reference Paths
Signing
Security
Publish
Code Analysis
Configuration: Active (Debug)
Platform: Active (Any CPU)
General
Conditional compilation symbols:
Define DEBUG constant
Define TRACE constant
Platform target: x86
Prefer 32-bit
Allow unsafe code
Optimize code
Errors and warnings
Warning level: 4
Suppress warnings:
Treat warnings as errors
None
All
Solution Explorer
Search Solution Explorer (Ctrl+;)
Solution 'WindowsFormsApp1' (1 of 1 proje
WindowsFormsApp1
Properties
AssemblyInfo.cs
Resources.resx
Settings.settings
References
Form1.cs
Program.cs
Solution Explorer
Git Changes
Class View
Properties
Output
Show output from:
Error List ...
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Ready
Add to Source Control
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ENG
07:43
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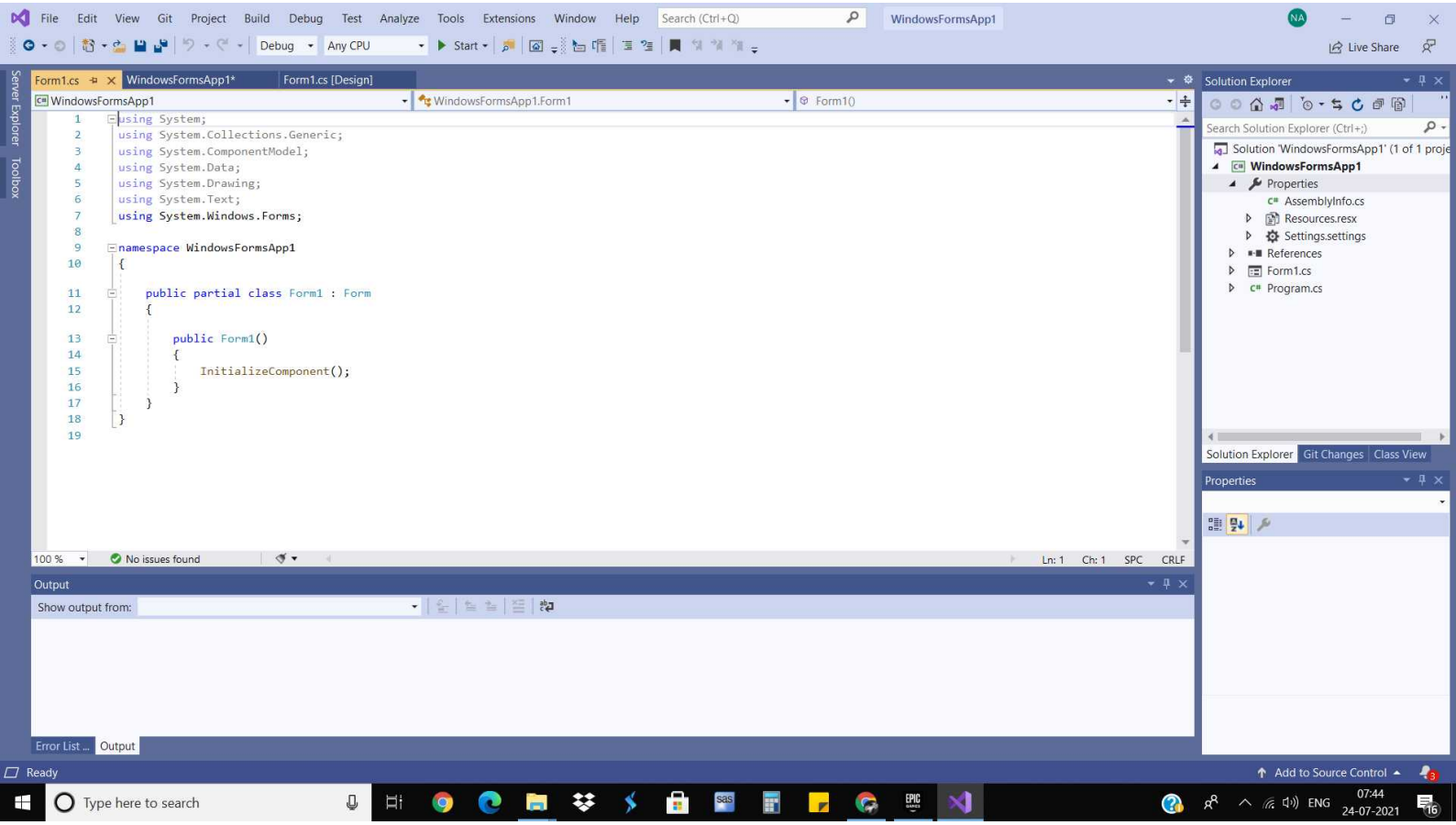
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
Search (Ctrl+Q)
WindowsFormsApp1
Debug
Any CPU
Start
Live Share
Form1.cs
WindowsFormsApp1*
Form1.cs [Design]
WindowsFormsApp1
WindowsFormsApp1.Form1
Form1()
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Text;
using System.Windows.Forms;
namespace WindowsFormsApp1
{
public partial class Form1 : Form
{
public Form1()
{
InitializeComponent();
}
}
}
Solution Explorer
Solution 'WindowsFormsApp1' (1 of 1 proje
WindowsFormsApp1
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AssemblyInfo.cs
Resources.resx
Settings.settings
References
Form1.cs
Program.cs
Solution Explorer
Git Changes
Class View
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Ln: 1
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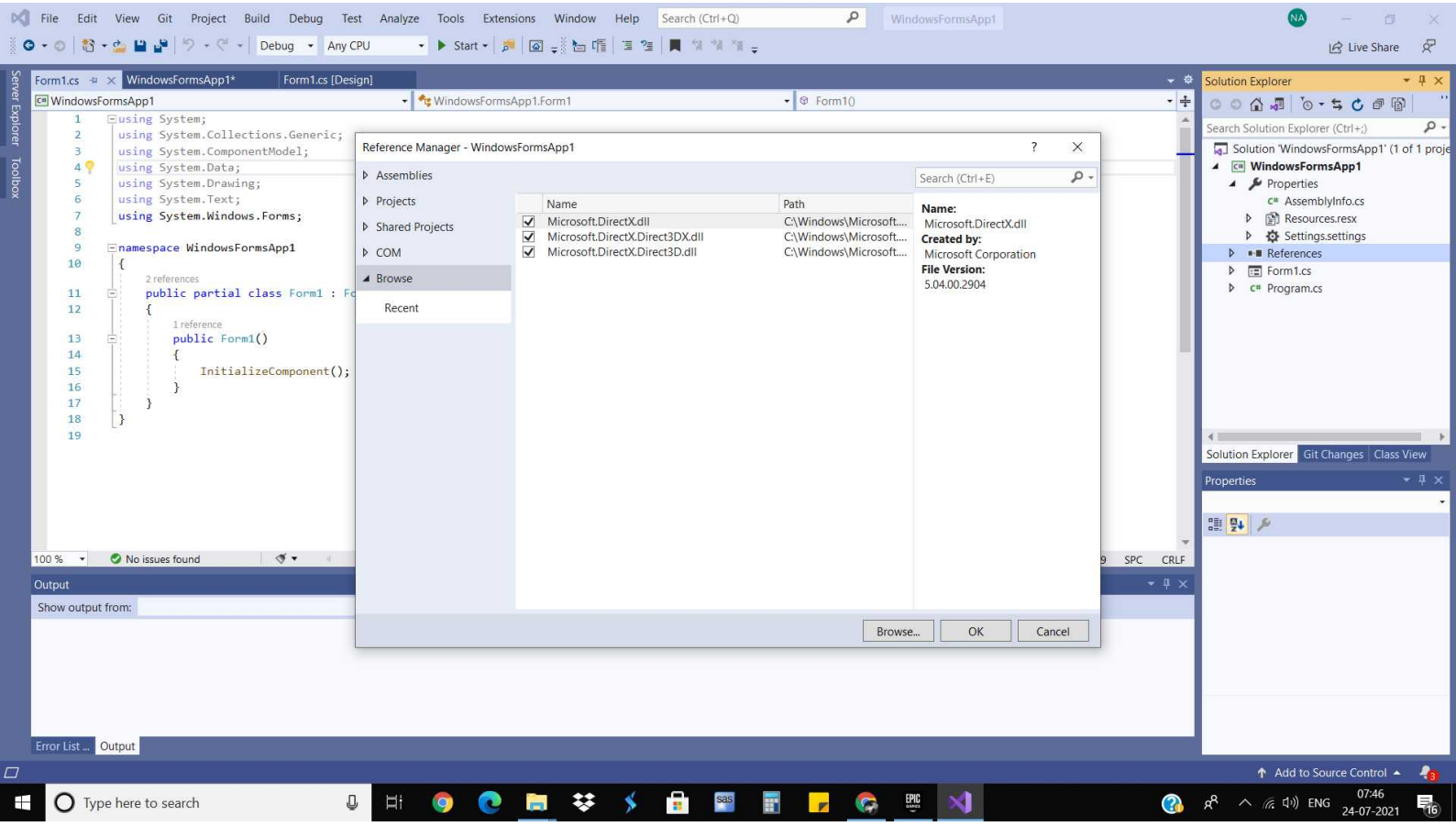
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
Search (Ctrl+Q)
WindowsFormsApp1
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Form1.cs
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Form1.cs [Design]
WindowsFormsApp1
WindowsFormsApp1.Form1
Form1()
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Text;
using System.Windows.Forms;
namespace WindowsFormsApp1
{
2 references
public partial class Form1 : Fo
{
1 reference
public Form1()
{
InitializeComponent();
}
}
}
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Show output from:
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Reference Manager - WindowsFormsApp1
Assemblies
Projects
Shared Projects
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Browse
Recent
Search (Ctrl+E)
Name
Path
Microsoft.DirectX.dll
C:\Windows\Microsoft....
Microsoft.DirectX.Direct3DX.dll
C:\Windows\Microsoft....
Microsoft.DirectX.Direct3D.dll
C:\Windows\Microsoft....
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Microsoft.DirectX.dll
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Microsoft Corporation
File Version:
5.04.00.2904
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Solution 'WindowsFormsApp1' (1 of 1 proje
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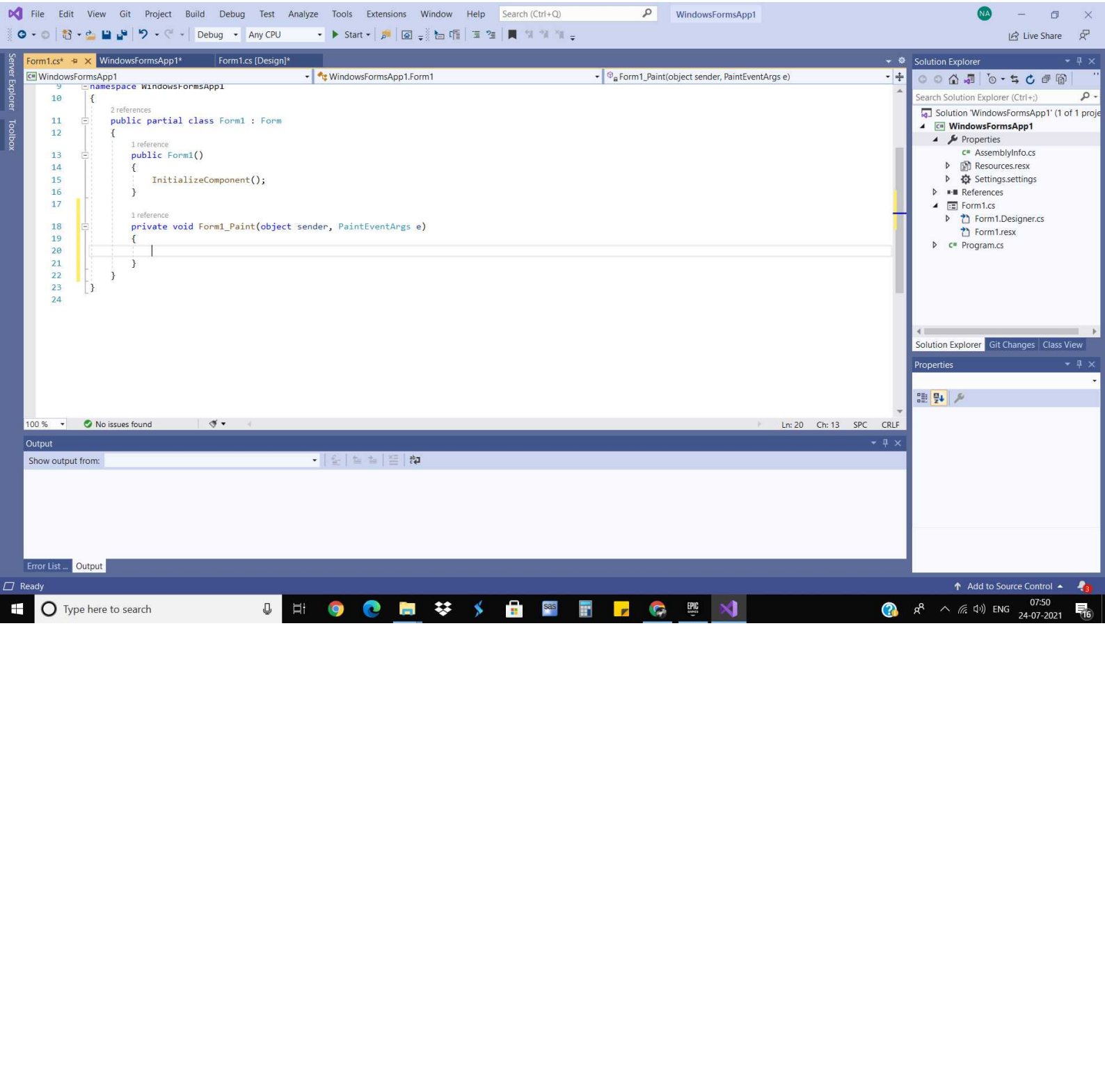
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
Search (Ctrl+Q)
WindowsFormsApp1
Debug
Any CPU
Start
Live Share
Form1.cs*
WindowsFormsApp1*
Form1.cs [Design]*
WindowsFormsApp1
WindowsFormsApp1.Form1
Form1_Paint(object sender, PaintEventArgs e)
namespace WindowsFormsApp1
{
2 references
public partial class Form1 : Form
{
1 reference
public Form1()
{
InitializeComponent();
}
1 reference
private void Form1_Paint(object sender, PaintEventArgs e)
{
}
}
}
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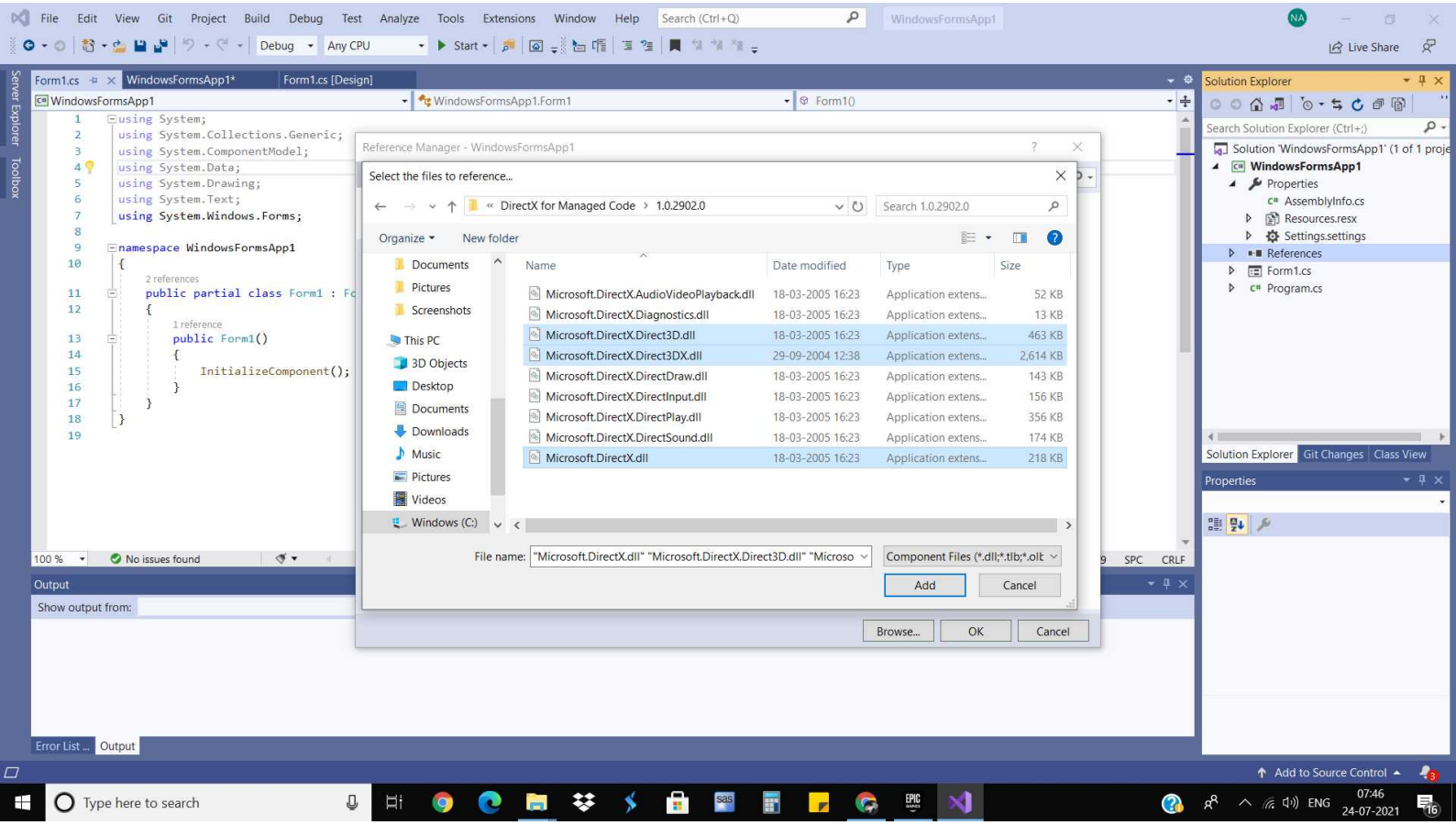
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
Search (Ctrl+Q)
WindowsFormsApp1
Debug
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Live Share
Form1.cs
WindowsFormsApp1*
Form1.cs [Design]
WindowsFormsApp1
WindowsFormsApp1.Form1
Form1()
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Text;
using System.Windows.Forms;
namespace WindowsFormsApp1
{
2 references
public partial class Form1 : Fo
{
1 reference
public Form1()
{
InitializeComponent();
}
}
}
Reference Manager - WindowsFormsApp1
Select the files to reference...
DirectX for Managed Code › 1.0.2902.0
Search 1.0.2902.0
Organize
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Microsoft.DirectX.Diagnostics.dll 18-03-2005 16:23 Application extens... 13 KB
Microsoft.DirectX.Direct3D.dll 18-03-2005 16:23 Application extens... 463 KB
Microsoft.DirectX.Direct3DX.dll 29-09-2004 12:38 Application extens... 2,614 KB
Microsoft.DirectX.DirectDraw.dll 18-03-2005 16:23 Application extens... 143 KB
Microsoft.DirectX.DirectInput.dll 18-03-2005 16:23 Application extens... 156 KB
Microsoft.DirectX.DirectPlay.dll 18-03-2005 16:23 Application extens... 356 KB
Microsoft.DirectX.DirectSound.dll 18-03-2005 16:23 Application extens... 174 KB
Microsoft.DirectX.dll 18-03-2005 16:23 Application extens... 218 KB
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Show output from:
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Error List ...
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Add to Source Control
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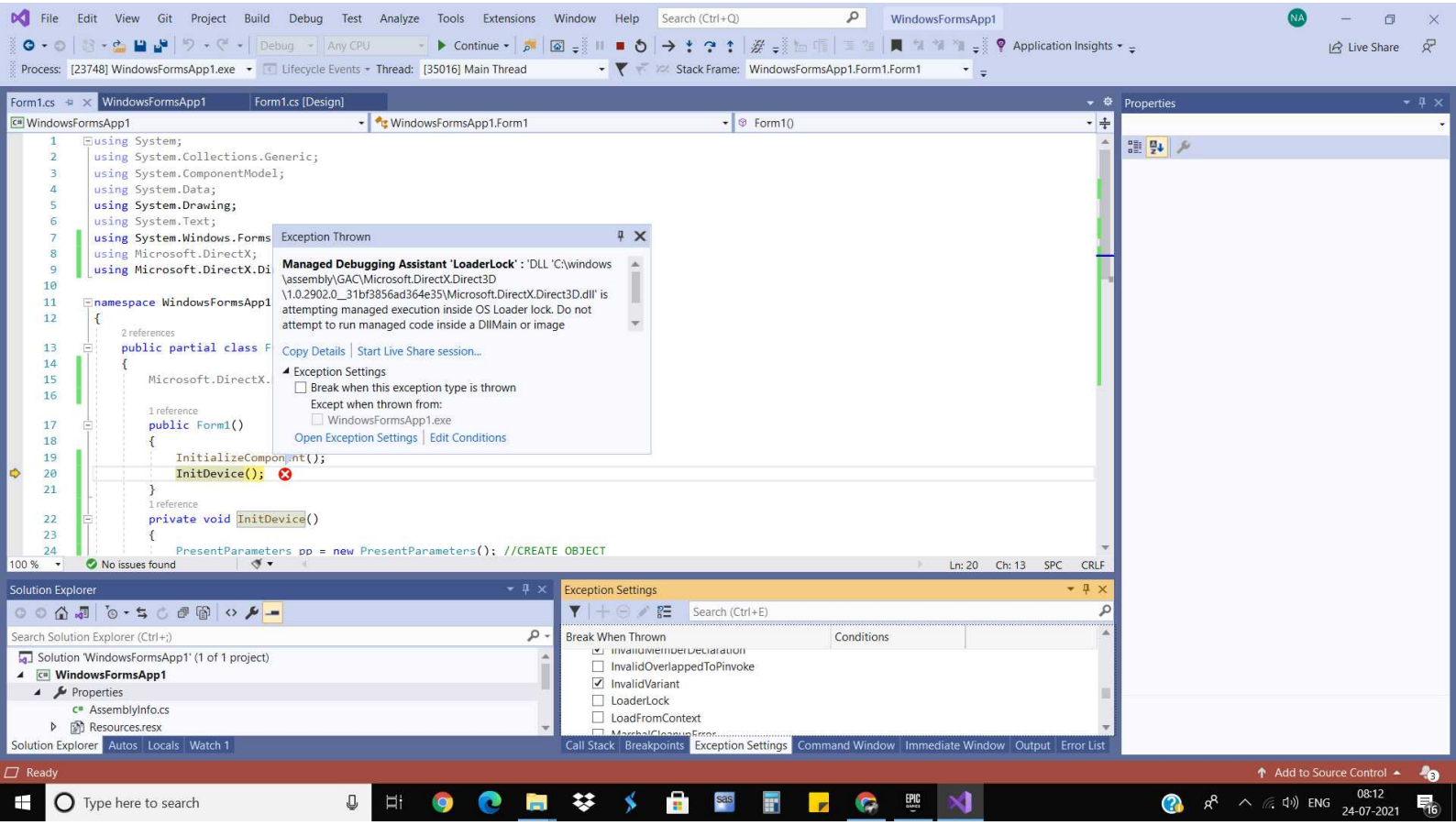
24-07-2021


File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
Search (Ctrl+Q)
WindowsFormsApp1
Debug
Any CPU
Continue
Application Insights
Live Share
Process: [23748] WindowsFormsApp1.exe
Lifecycle Events
Thread: [35016] Main Thread
Stack Frame: WindowsFormsApp1.Form1.Form1
Form1.cs
WindowsFormsApp1
Form1.cs [Design]
WindowsFormsApp1
WindowsFormsApp1.Form1
Form1()
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.Di
namespace WindowsFormsApp1
{
2 references
public partial class F
{
Microsoft.DirectX.
1 reference
public Form1()
{
InitializeComponent();
InitDevice();
}
1 reference
private void InitDevice()
{
PresentParameters pp = new PresentParameters(); //CREATE OBJECT
Exception Thrown
Managed Debugging Assistant 'LoaderLock' : 'DLL 'C:\windows \assembly\GAC\Microsoft.DirectX.Direct3D \1.0.2902.0__31bf3856ad364e35\Microsoft.DirectX.Direct3D.dll' is attempting managed execution inside OS Loader lock. Do not attempt to run managed code inside a DllMain or image
Copy Details
Start Live Share session...
Exception Settings
Break when this exception type is thrown
Except when thrown from:
WindowsFormsApp1.exe
Open Exception Settings
Edit Conditions
100 %
No issues found
Ln: 20
Ch: 13
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CRLF
Properties
Solution Explorer
Search Solution Explorer (Ctrl+;)
Solution 'WindowsFormsApp1' (1 of 1 project)
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Exception Settings
Search (Ctrl+E)
Break When Thrown
Conditions
InvalidOverlappedToPinvoke
InvalidVariant
LoaderLock
LoadFromContext
Call Stack
Breakpoints
Exception Settings
Command Window
Immediate Window
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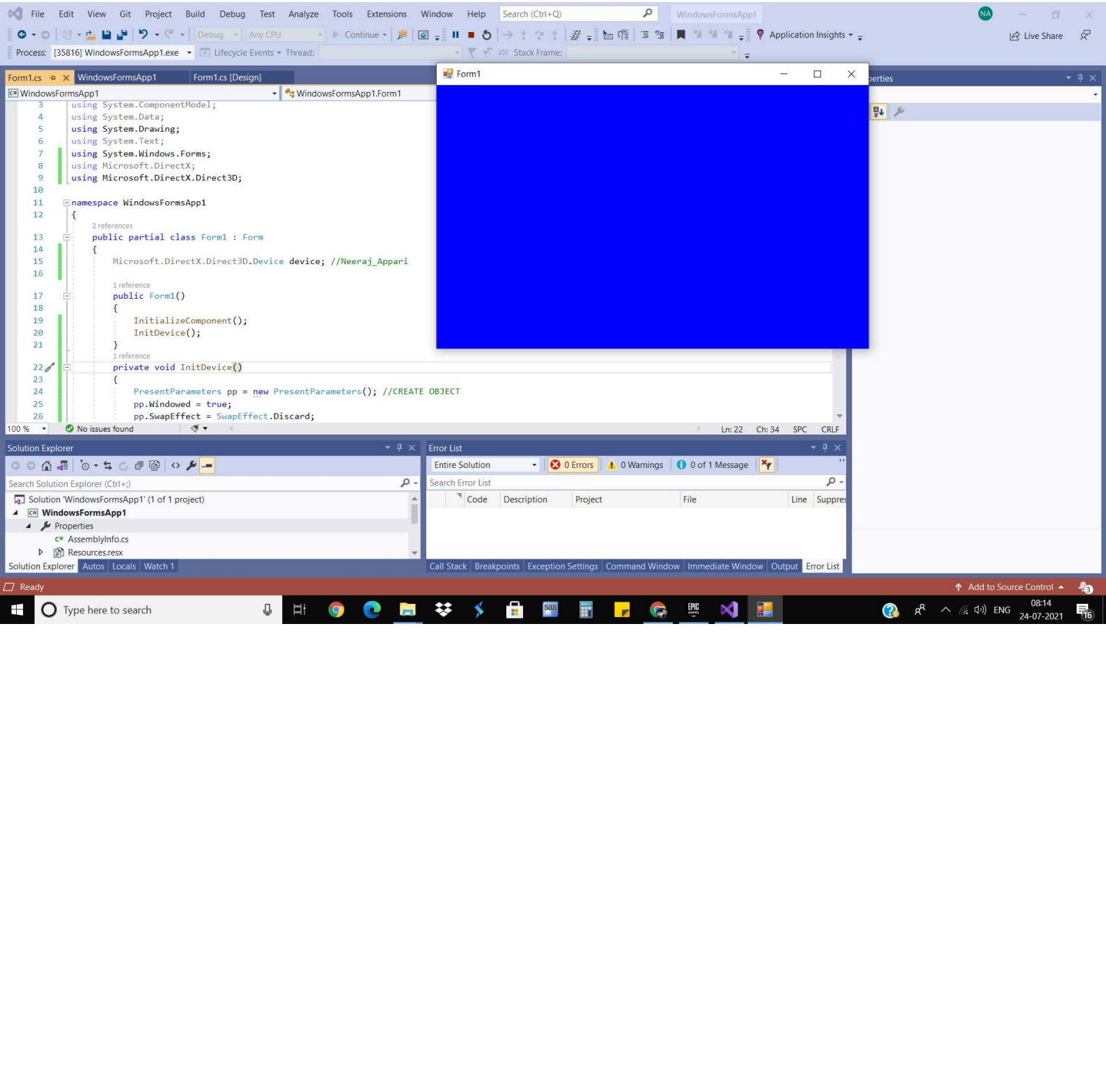
24-07-2021


File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
Search (Ctrl+Q)
WindowsFormsApp1
Application Insights
Live Share
Process: [35816] WindowsFormsApp1.exe
Lifecycle Events
Thread:
Stack Frame:
Form1.cs
WindowsFormsApp1
Form1.cs [Design]
WindowsFormsApp1.Form1
Form1
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Text;
using System.Windows.Forms;
using Microsoft.DirectX;
using Microsoft.DirectX.Direct3D;
namespace WindowsFormsApp1
{
2 references
public partial class Form1 : Form
{
Microsoft.DirectX.Direct3D.Device device; //Neeraj_Appari
1 reference
public Form1()
{
InitializeComponent();
InitDevice();
}
1 reference
private void InitDevice()
{
PresentParameters pp = new PresentParameters(); //CREATE OBJECT
pp.Windowed = true;
pp.SwapEffect = SwapEffect.Discard;
100 %
No issues found
Ln: 22
Ch: 34
SPC
CRLF
Solution Explorer
Search Solution Explorer (Ctrl+;)
Solution 'WindowsFormsApp1' (1 of 1 project)
WindowsFormsApp1
Properties
AssemblyInfo.cs
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Autos
Locals
Watch 1
Error List
Entire Solution
0 Errors
0 Warnings
0 of 1 Message
Search Error List
Code
Description
Project
File
Line
Call Stack
Breakpoints
Exception Settings
Command Window
Immediate Window
Output
Error List
Ready
Add to Source Control
Type here to search
ENG
08:14
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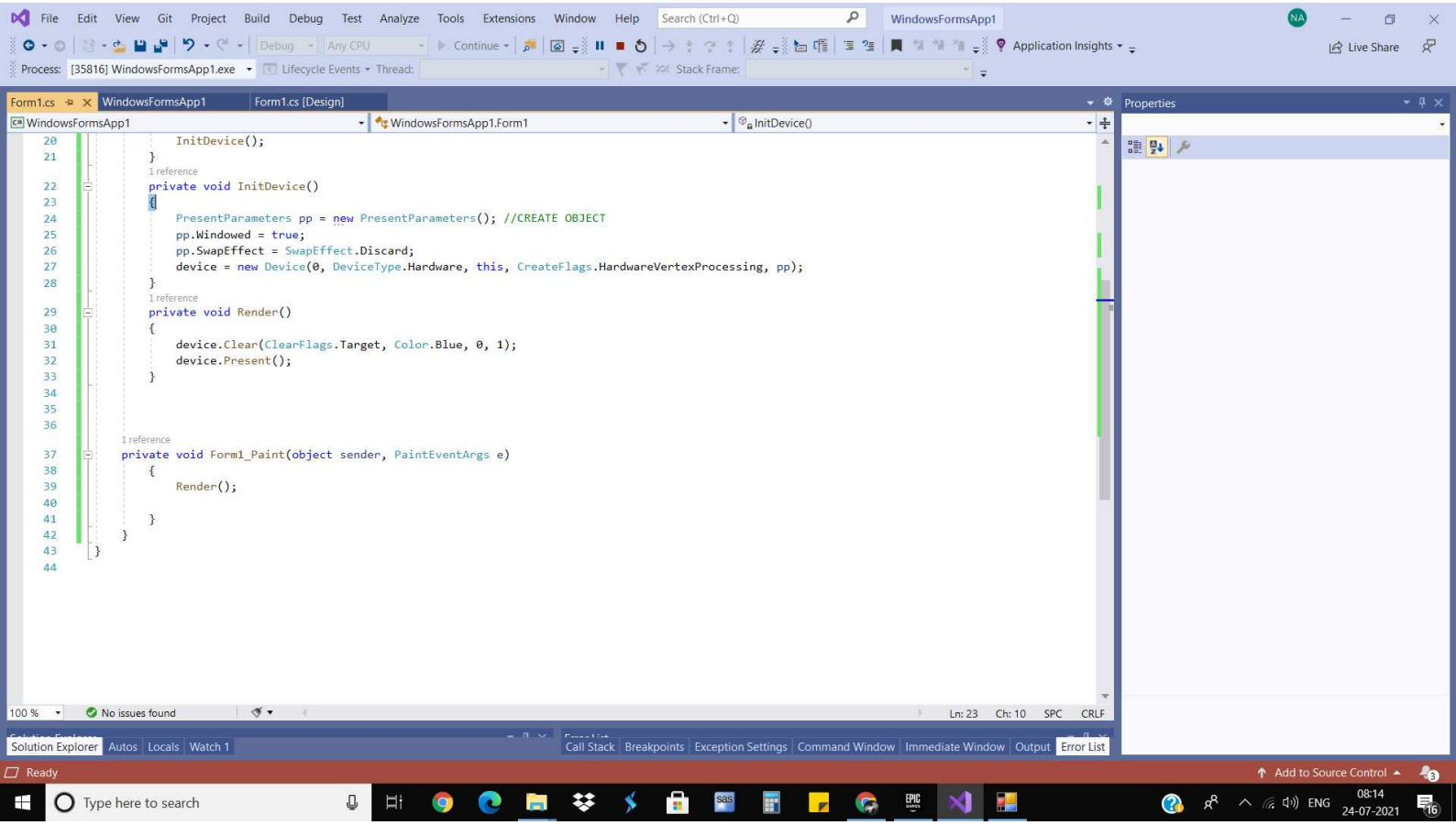
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
Search (Ctrl+Q)
WindowsFormsApp1
Debug
Any CPU
Continue
Application Insights
Live Share
Process: [35816] WindowsFormsApp1.exe
Lifecycle Events
Thread:
Stack Frame:
Form1.cs
WindowsFormsApp1
Form1.cs [Design]
WindowsFormsApp1
WindowsFormsApp1.Form1
InitDevice()
Properties
InitDevice();
}
1 reference
private void InitDevice()
{
PresentParameters pp = new PresentParameters(); //CREATE OBJECT
pp.Windowed = true;
pp.SwapEffect = SwapEffect.Discard;
device = new Device(0, DeviceType.Hardware, this, CreateFlags.HardwareVertexProcessing, pp);
}
1 reference
private void Render()
{
device.Clear(ClearFlags.Target, Color.Blue, 0, 1);
device.Present();
}
1 reference
private void Form1_Paint(object sender, PaintEventArgs e)
{
Render();
}
}
}
100 %
No issues found
Ln: 23
Ch: 10
SPC
CRLF
Solution Explorer
Autos
Locals
Watch 1
Call Stack
Breakpoints
Exception Settings
Command Window
Immediate Window
Output
Error List
Ready
Add to Source Control
Type here to search
ENG
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