



LAB

SEPT 2022

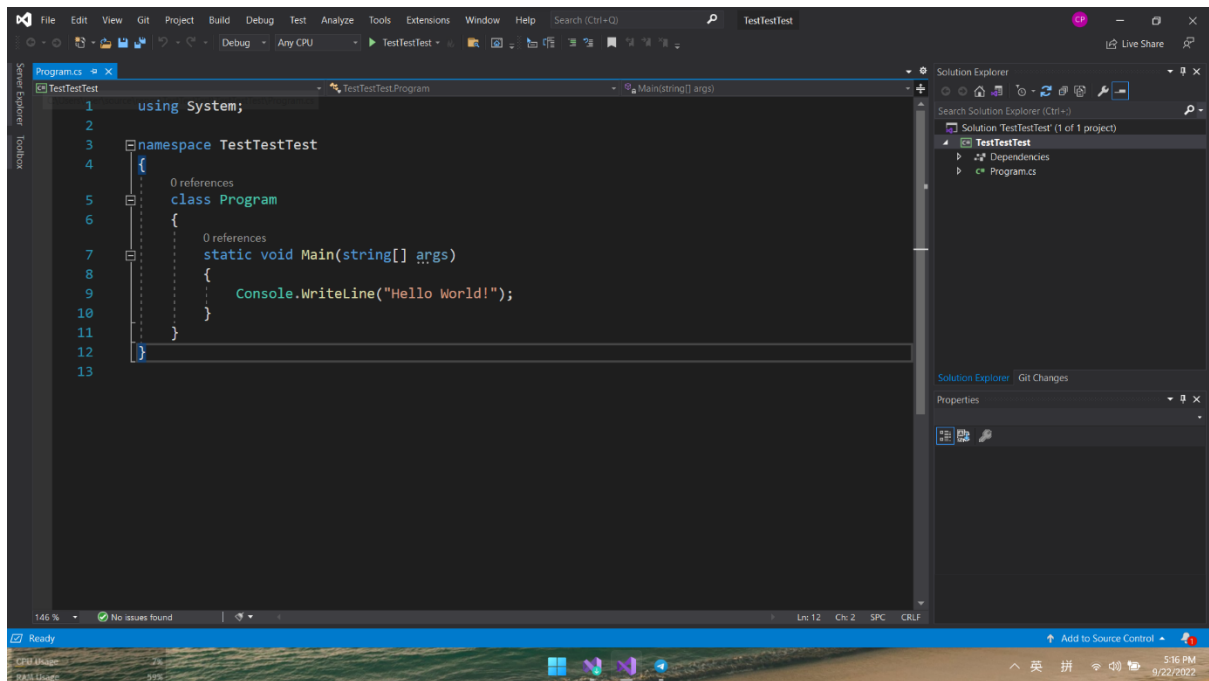
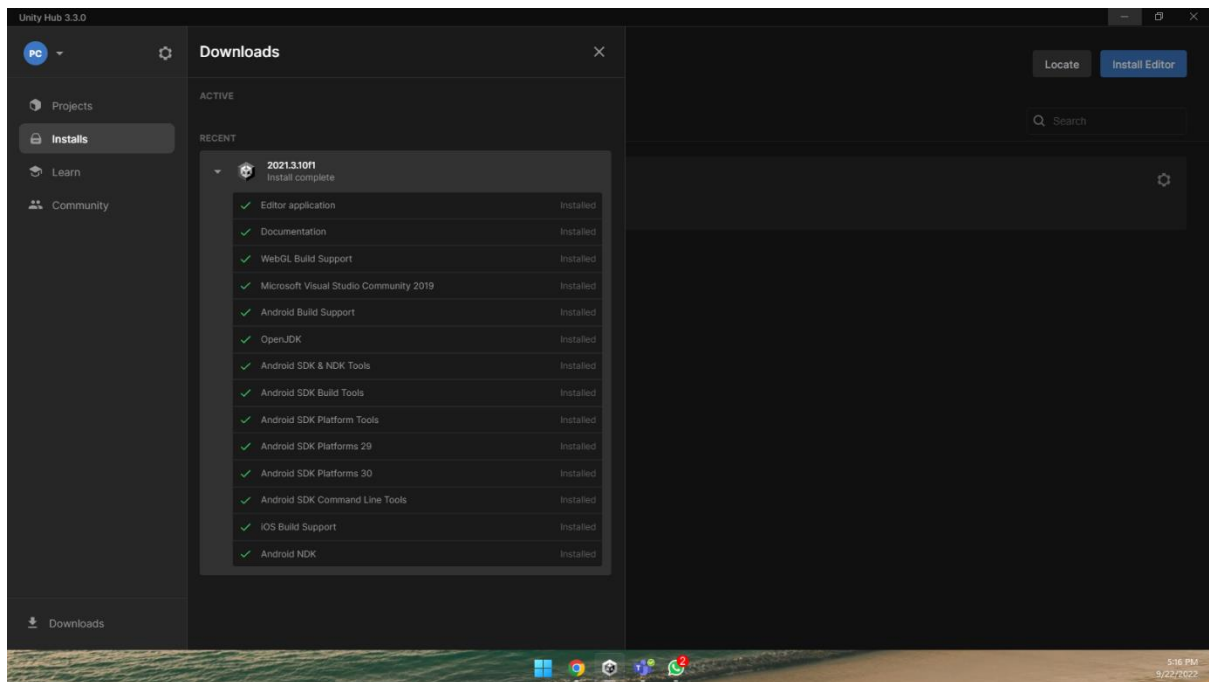
TEB1043

Object Oriented Programming

Lab

NO.	NAME	STUDENT ID	PROGRAM (IT / IS / CS / BM)
1.	CHENG PIN JIE	21000548	CS

Lab 1 – Download Unity



Lab 2 – All Operators

```
1  using System;
2
3  namespace OOP_LAB_2_2
4  {
5      0 references
6      class Program
7      {
8          0 references
9          static void Main(string[] args)
10         {
11             // Declare
12             int a = 6;
13             int b = 2;
14
15             // Assignment Operators
16             Console.WriteLine(a = b);
17             Console.WriteLine(a += b);
18             Console.WriteLine(a -= b);
19             Console.WriteLine(a *= b);
20             Console.WriteLine(a /= b);
21
22             // Logical Operators
23             Console.WriteLine(a != b && b == 2);
24             Console.WriteLine(a != b && b == 10);
25             Console.WriteLine(a != b || b == 2);
26             Console.WriteLine(!(b == 10));
27         }
28     }
29 }
```

Microsoft Visual Studio

2
4
2
4
2
False
False
True
True
C:\Users\user\OneDrive\Documents\OOP_LAB_2_Operators\Program.cs
ode 0.
To automatically close the console window when debugging is complete, press any key to continue.

```
Program.cs [X]
OOP_LAB_2_Operators
1  using System;
2
3  namespace OOP_LAB_2_Operators
4  {
5      0 references
6      class Program
7      {
8          0 references
9          static void Main(string[] args)
10         {
11             int a = 6;
12             int b = 2;
13
14             // Arithmetic Operators
15             Console.WriteLine(a + b);
16             Console.WriteLine(a - b);
17             Console.WriteLine(a * b);
18             Console.WriteLine(a / b);
19             Console.WriteLine(a % b);
20             Console.WriteLine(a++);
21             Console.WriteLine(b--);
22
23             // Comparison Operators
24             Console.WriteLine(a == b);
25             Console.WriteLine(a != b);
26             Console.WriteLine(a > b);
27             Console.WriteLine(a >= b);
28             Console.WriteLine(a < b);
29             Console.WriteLine(a <= b);
30         }
31     }
32 }
```

Microsoft Visual Studio

8
4
12
3
0
6
2
False
True
True
True
False
False
C:\Users\user\OneDrive\Documents\OOP_LAB_2_Operators\Program.cs
e 0.
To automatically close the console window when debugging is complete, press any key to continue.

Lab 3 – String/Math

<https://onlinegdb.com/INP3R3bxw>

Lab 4 - Selection

<https://onlinegdb.com/Sz2L1Vnwz>

Lab 5 – Create a student class with attributes name, ID, method to go to class

```
1  using System;
2
3  namespace OOP_Lab_5
4  {
5      2 references
6      class Student
7      {
8          public string name;
9          public int id;
10
11          1 reference
12          public void rideToClass()
13          {
14              Console.WriteLine("I am going to ride to class.");
15          }
16
17          0 references
18          static void Main(string[] args)
19          {
20              // Creating object
21              Student stud = new Student();
22
23              // Field
24              stud.name = "Cheng Pin-Jie.";
25              stud.id = 21000548;
26
27              // Method and Display
28              Console.WriteLine("I am " + stud.name);
29              Console.WriteLine("My id is " + stud.id);
30              stud.rideToClass();
31          }
32      }
33  }
```

Lab 6 – Protected access modifier & Encapsulation properties.

```
1  using System;
2
3  namespace OOP_Lab_6
4  {
5      1 reference
6      class Animal
7      {
8          protected string name = "lola";
9      }
10
11      2 references
12      class Program : Animal
13      {
14          0 references
15          static void Main(string[] args)
16          {
17              // Create object
18              Program cat1 = new Program();
19
20              // Accessing
21              Console.WriteLine("I am a cat");
22              Console.WriteLine("My name is " + cat1.name);
23          }
24      }
25  }
```

Microsoft Visual Studio
I am a cat
My name is lola
C:\Users\user\OneDrive\Documents\OOP_Lab 6\OOP_Lab 6\Program.cs
To automatically load when debugging, press any key to continue.

```
1  using System;
2
3  namespace OOP_Lab_6
4  {
5      2 references
6      class Animal
7      {
8          private string type;
9          2 references
10         public string Type
11         {
12             get { return type; }
13             set { type = value; }
14         }
15     }
16
17     0 references
18     class Program
19     {
20         0 references
21         static void Main(string[] args)
22         {
23             // Create object
24             Animal cat1 = new Animal();
25             cat1.Type = "Cat";
26             Console.WriteLine(cat1.Type);
27         }
28     }
29 }
```

Microsoft Visual Studio
Cat
C:\Users\user\OneDrive\Documents\OOP_Lab 6\OOP_Lab 6\Program.cs
To automatically load when debugging, press any key to continue.

Lab 7 – Abstraction & Interface

```
1 using System;
2
3 namespace OOP_Lab_7
4 {
5     1 reference
6     abstract class animal
7     {
8         2 references
9         public abstract void sound();
10    }
11
12    2 references
13    class Cat : animal
14    {
15        2 references
16        public override void sound()
17        {
18            Console.WriteLine("Cat goes meow");
19        }
20    }
21
22    1 reference
23    interface Ianimal
24    {
25        2 references
26        void DogSound();
27    }
28
29    2 references
30    class Dog: Ianimal
31    {
32        2 references
33        public void DogSound()
34        {
35            Console.WriteLine("Dog goes woff");
36        }
37    }
38
39    0 references
40    class Program
41    {
42        0 references
43        static void Main (string[] args)
44        {
45            Cat c1 = new Cat();
46            c1.sound();
47        }
48    }
49 }
```

Microsoft Visual Studio Debug Console

Cat goes meow
Dog goes woff

C:\Users\user\OneDrive - Universiti Te
7\OOP_Lab 7\OOP_Lab 7\bin\Debug\netcor
To automatically close the console whe
le when debugging stops.
Press any key to close this window . .

Lab 8 – 3D model



Lab 9 – 3D model and marker

FAILURE: Build failed with an exception.

* What went wrong:

Execution failed for task ':launcher:packageRelease'.

> A failure occurred while executing

com.android.build.gradle.internal.tasks.Workers\$ActionFacade

> com.android.ide.common.signing.KeytoolException: Failed to read key AndroidDebugKey from store "C:\Users\user\.android\debug.keystore": Invalid keystore format

* Try:

Run with --stacktrace option to get the stack trace. Run with --info or --debug option to get more log output. Run with --scan to get full insights.

* Get more help at <https://help.gradle.org>

BUILD FAILED in 9s

Picked up JAVA_TOOL_OPTIONS: -Dfile.encoding=UTF-8

UnityEditor.BuildPlayerWindow:BuildPlayerAndRun ()

Gradle | Search for Help with Gradle Build Tool

CommandInvocationFailure: Gradle build failed.

C:\Program

Files\Unity\Hub\Editor\2021.3.10f1\Editor\Data\PlaybackEngines\AndroidPlayer\OpenJDK\bin\java.exe -classpath "C:\Program

Files\Unity\Hub\Editor\2021.3.10f1\Editor\Data\PlaybackEngines\AndroidPlayer\Tools\gradle\lib\gradle-launcher-6.1.1.jar" org.gradle.launcher.GradleMain "-Dorg.gradle.jvmargs=-Xmx4096m" "assembleRelease"

Environment Variables:

NVIDIAWHITELISTED = 0x01

USERDOMAIN = EDWARD

ProgramFiles = C:\Program Files

TMP = C:\Users\user\AppData\Local\Temp

PROCESSOR_ARCHITECTURE = AMD64

PROCESSOR_REVISION = 5000

OS = Windows_NT

CHROME_CRASHPAD_PIPE_NAME = \\.\pipe\crashpad_21484_UMUPJMYPWQHGEAEH

PROCESSOR_IDENTIFIER = AMD64 Family 25 Model 80 Stepping 0, AuthenticAMD

ProgramW6432 = C:\Program Files

USERPROFILE = C:\Users\user

JAVA_HOME = C:\Program

Files\Unity\Hub\Editor\2021.3.10f1\Editor\Data\PlaybackEngines\AndroidPlayer\OpenJDK

CommonProgramFiles = C:\Program Files\Common Files

DriverData = C:\Windows\System32\Drivers\DriverData

ComSpec = C:\Windows\system32\cmd.exe

PSModulePath = C:\Program
 Files\WindowsPowerShell\Modules;C:\Windows\system32\WindowsPowerShell\v1.0\Modules
 PUBLIC = C:\Users\Public
 USERNAME = user
 NUMBER_OF_PROCESSORS = 12
 JAVA_TOOL_OPTIONS = -Dfile.encoding=UTF-8
 FPS_BROWSER_APP_PROFILE_STRING = Internet Explorer
 HOMEDRIVE = C:
 TEMP = C:\Users\user\AppData\Local\Temp
 Path = C:\Program Files\Microsoft\jdk-11.0.12.7-
 hotspot\bin;C:\Windows\system32;C:\Windows;C:\Windows\System32\Wbem;C:\Windows\Syste
 m32\WindowsPowerShell\v1.0;C:\Windows\System32\OpenSSH;C:\Program Files (x86)\NVIDIA
 Corporation\PhysX\Common;C:\Program Files\NVIDIA Corporation\NVIDIA NvDLISR;C:\Program
 Files (x86)\Windows Kits\10\Windows Performance
 Toolkit;C:\CPJ\Software\flutter_windows_3.0.4-stable\flutter\bin;C:\Program
 Files\dotnet;C:\Users\user\AppData\Local\Microsoft\WindowsApps;C:\Users\user\AppData\Local
 \Programs\Microsoft VS Code\bin;C:\msys64\mingw64\bin;C:\Users\user\dotnet\tools
 COMPUTERTNAME = EDWARD
 PATHEXT = .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
 OneDriveCommercial = C:\Users\user\OneDrive - Universiti Teknologi PETRONAS
 ALLUSERSPROFILE = C:\ProgramData
 SystemDrive = C:
 windir = C:\Windows
 FPS_BROWSER_USER_PROFILE_STRING = Default
 HOMEPATH = \Users\user
 CommonProgramFiles(x86) = C:\Program Files (x86)\Common Files
 APPDATA = C:\Users\user\AppData\Roaming
 OneDrive = C:\Users\user\OneDrive - Universiti Teknologi PETRONAS
 PROCESSOR_LEVEL = 25
 CommonProgramW6432 = C:\Program Files\Common Files
 ProgramFiles(x86) = C:\Program Files (x86)
 SystemRoot = C:\Windows
 SESSIONNAME = Console
 LOGONSERVER = \\EDWARD
 LOCALAPPDATA = C:\Users\user\AppData\Local
 VBOX_MSI_INSTALL_PATH = C:\Program Files\Oracle\VirtualBox\
 SHIM_MCCOMPAT = 0x81000001
 USERDOMAIN_ROAMINGPROFILE = EDWARD
 ProgramData = C:\ProgramData
 ORIGINAL_XDG_CURRENT_DESKTOP = undefined

stderr[

FAILURE: Build failed with an exception.

* What went wrong:

Execution failed for task ':launcher:packageRelease'.

> A failure occurred while executing

com.android.build.gradle.internal.tasks.Workers\$ActionFacade

> com.android.ide.common.signing.KeytoolException: Failed to read key AndroidDebugKey from store "C:\Users\user\.android\debug.keystore": Invalid keystore format

* Try:

Run with --stacktrace option to get the stack trace. Run with --info or --debug option to get more log output. Run with --scan to get full insights.

* Get more help at <https://help.gradle.org>

BUILD FAILED in 9s

Picked up JAVA_TOOL_OPTIONS: -Dfile.encoding=UTF-8

]

stdout[

Starting a Gradle Daemon, 1 incompatible and 2 stopped Daemons could not be reused, use --status for details

> Configure project :launcher

WARNING: The option setting 'android.enableR8=false' is deprecated.

It will be removed in version 5.0 of the Android Gradle plugin.

You will no longer be able to disable R8

Exception while marshalling C:\Program

Files\Unity\Hub\Editor\2021.3.10f1\Editor\Data\PlaybackEngines\AndroidPlayer\SDK\build-tools\30.0.2\package.xml. Probably the SDK is read-only

Exception while marshalling C:\Program

Files\Unity\Hub\Editor\2021.3.10f1\Editor\Data\PlaybackEngines\AndroidPlayer\SDK\platform-tools\package.xml. Probably the SDK is read-only

Exception while marshalling C:\Program

Files\Unity\Hub\Editor\2021.3.10f1\Editor\Data\PlaybackEngines\AndroidPlayer\SDK\platforms\android-29\package.xml. Probably the SDK is read-only

Exception while marshalling C:\Program

Files\Unity\Hub\Editor\2021.3.10f1\Editor\Data\PlaybackEngines\AndroidPlayer\SDK\platforms\android-30\package.xml. Probably the SDK is read-only

Exception while marshalling C:\Program

Files\Unity\Hub\Editor\2021.3.10f1\Editor\Data\PlaybackEngines\AndroidPlayer\SDK\tools\package.xml. Probably the SDK is read-only

Exception while marshalling C:\Program

Files\Unity\Hub\Editor\2021.3.10f1\Editor\Data\PlaybackEngines\AndroidPlayer\SDK\build-tools\30.0.2\package.xml. Probably the SDK is read-only

Exception while marshalling C:\Program

Files\Unity\Hub\Editor\2021.3.10f1\Editor\Data\PlaybackEngines\AndroidPlayer\SDK\platform-tools\package.xml. Probably the SDK is read-only

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Files\Unity\Hub\Editor\2021.3.10f1\Editor\Data\PlaybackEngines\AndroidPlayer\SDK\platforms\android-29\package.xml. Probably the SDK is read-only

Exception while marshalling C:\Program

Files\Unity\Hub\Editor\2021.3.10f1\Editor\Data\PlaybackEngines\AndroidPlayer\SDK\platforms\android-30\package.xml. Probably the SDK is read-only

Exception while marshalling C:\Program

Files\Unity\Hub\Editor\2021.3.10f1\Editor\Data\PlaybackEngines\AndroidPlayer\SDK\tools\package.xml. Probably the SDK is read-only

- > Task :unityLibrary:preBuild UP-TO-DATE
- > Task :launcher:preBuild UP-TO-DATE
- > Task :unityLibrary:preReleaseBuild UP-TO-DATE
- > Task :launcher:preReleaseBuild UP-TO-DATE
- > Task :unityLibrary:compileReleaseAidl NO-SOURCE
- > Task :unityLibrary:packageReleaseRenderscript NO-SOURCE
- > Task :launcher:generateReleaseBuildConfig UP-TO-DATE
- > Task :launcher:compileReleaseAidl NO-SOURCE
- > Task :unityLibrary:compileReleaseRenderscript NO-SOURCE
- > Task :launcher:compileReleaseRenderscript NO-SOURCE
- > Task :unityLibrary:generateReleaseResValues UP-TO-DATE
- > Task :unityLibrary:generateReleaseResources UP-TO-DATE
- > Task :launcher:javaPreCompileRelease UP-TO-DATE
- > Task :launcher:generateReleaseResValues UP-TO-DATE
- > Task :launcher:generateReleaseResources UP-TO-DATE
- > Task :launcher:createReleaseCompatibleScreenManifests UP-TO-DATE
- > Task :launcher:extractDeepLinksRelease UP-TO-DATE
- > Task :unityLibrary:packageReleaseResources UP-TO-DATE
- > Task :launcher:prepareLintJar UP-TO-DATE
- > Task :unityLibrary:extractDeepLinksRelease UP-TO-DATE
- > Task :unityLibrary:processReleaseManifest UP-TO-DATE
- > Task :unityLibrary:compileReleaseLibraryResources UP-TO-DATE
- > Task :unityLibrary:parseReleaseLocalResources UP-TO-DATE
- > Task :unityLibrary:generateReleaseBuildConfig UP-TO-DATE
- > Task :unityLibrary:javaPreCompileRelease UP-TO-DATE
- > Task :unityLibrary:prepareLintJarForPublish UP-TO-DATE
- > Task :unityLibrary:generateReleaseRFile UP-TO-DATE
- > Task :launcher:mergeReleaseResources UP-TO-DATE
- > Task :unityLibrary:compileReleaseJavaWithJavac UP-TO-DATE
- > Task :launcher:processReleaseManifest UP-TO-DATE
- > Task :unityLibrary:bundleLibCompileToJarRelease UP-TO-DATE
- > Task :unityLibrary:bundleLibRuntimeToJarRelease UP-TO-DATE
- > Task :unityLibrary:mergeReleaseShaders UP-TO-DATE
- > Task :unityLibrary:compileReleaseShaders NO-SOURCE
- > Task :unityLibrary:generateReleaseAssets UP-TO-DATE
- > Task :launcher:processReleaseResources UP-TO-DATE
- > Task :launcher:compileReleaseJavaWithJavac UP-TO-DATE
- > Task :launcher:compileReleaseSources UP-TO-DATE
- > Task :unityLibrary:packageReleaseAssets
- > Task :unityLibrary:processReleaseJavaRes NO-SOURCE
- > Task :unityLibrary:bundleLibResRelease NO-SOURCE
- > Task :unityLibrary:mergeReleaseJniLibFolders UP-TO-DATE
- > Task :unityLibrary:mergeReleaseNativeLibs UP-TO-DATE
- > Task :unityLibrary:stripReleaseDebugSymbols UP-TO-DATE
- > Task :unityLibrary:copyReleaseJniLibsProjectOnly UP-TO-DATE
- > Task :launcher:lintVitalRelease

```
> Task :launcher:checkReleaseDuplicateClasses UP-TO-DATE
> Task :launcher:dexBuilderRelease UP-TO-DATE
> Task :launcher:desugarReleaseFileDependencies UP-TO-DATE
> Task :launcher:mergeExtDexRelease UP-TO-DATE
> Task :launcher:mergeDexRelease UP-TO-DATE
> Task :launcher:mergeReleaseShaders UP-TO-DATE
> Task :launcher:compileReleaseShaders NO-SOURCE
> Task :launcher:generateReleaseAssets UP-TO-DATE
> Task :launcher:mergeReleaseAssets
> Task :launcher:processReleaseJavaRes NO-SOURCE
> Task :launcher:mergeReleaseJavaResource UP-TO-DATE
> Task :launcher:collectReleaseDependencies UP-TO-DATE
> Task :launcher:sdkReleaseDependencyData UP-TO-DATE
> Task :launcher:mergeReleaseJniLibFolders UP-TO-DATE
> Task :launcher:mergeReleaseNativeLibs UP-TO-DATE
> Task :launcher:stripReleaseDebugSymbols UP-TO-DATE
> Task :launcher:validateSigningRelease UP-TO-DATE
> Task :launcher:packageRelease FAILED
```

45 actionable tasks: 4 executed, 41 up-to-date

]

exit code: 1

UnityEditor.Android.Command.WaitForProgramToRun (UnityEditor.Utils.Program p, UnityEditor.Android.Command+WaitingForProcessToExit waitingForProcessToExit, System.String errorMsg) (at <254d6ba8d2224b2793130e21dc037be2>:0)

UnityEditor.Android.Command.Run (System.Diagnostics.ProcessStartInfo psi, UnityEditor.Android.Command+WaitingForProcessToExit waitingForProcessToExit, System.String errorMsg) (at <254d6ba8d2224b2793130e21dc037be2>:0)

UnityEditor.Android.Command.Run (System.String command, System.String args, System.String workingdir, UnityEditor.Android.Command+WaitingForProcessToExit waitingForProcessToExit, System.String errorMsg) (at <254d6ba8d2224b2793130e21dc037be2>:0)

UnityEditor.Android.AndroidJavaTools.RunJava (System.String args, System.String workingdir, System.Action`1[T] progress, System.String error) (at <254d6ba8d2224b2793130e21dc037be2>:0)

UnityEditor.Android.GradleWrapper.Run (UnityEditor.Android.AndroidJavaTools javaTools, Unity.Android.Gradle.AndroidGradle androidGradle, System.String workingdir, System.String task, System.Action`1[T] progress) (at <254d6ba8d2224b2793130e21dc037be2>:0)

Rethrow as GradleInvocationException: Gradle build failed

UnityEditor.Android.GradleWrapper.Run (UnityEditor.Android.AndroidJavaTools javaTools, Unity.Android.Gradle.AndroidGradle androidGradle, System.String workingdir, System.String task, System.Action`1[T] progress) (at <254d6ba8d2224b2793130e21dc037be2>:0)

UnityEditor.Android.PostProcessor.Tasks.BuildGradleProject.Execute (UnityEditor.Android.PostProcessor.PostProcessorContext context) (at <254d6ba8d2224b2793130e21dc037be2>:0)

UnityEditor.Android.PostProcessor.PostProcessRunner.RunAllTasks (UnityEditor.Android.PostProcessor.PostProcessorContext context) (at <254d6ba8d2224b2793130e21dc037be2>:0)

Rethrow as BuildFailedException: Exception of type 'UnityEditor.Build.BuildFailedException' was thrown.

UnityEditor.Android.PostProcessor.CancelPostProcess.AbortBuild (System.String title,

System.String message, System.Exception ex) (at <254d6ba8d2224b2793130e21dc037be2>:0)
UnityEditor.Android.PostProcessor.PostProcessorRunner.RunAllTasks
(UnityEditor.Android.PostProcessor.PostProcessorContext context) (at
<254d6ba8d2224b2793130e21dc037be2>:0)
UnityEditor.Android.PostProcessAndroidPlayer.PostProcess
(UnityEditor.Modules.BuildPostProcessArgs args,
AndroidPlayerBuildProgram.Data.AndroidPlayerBuildProgramOutput buildProgramOutput) (at
<254d6ba8d2224b2793130e21dc037be2>:0)
UnityEditor.Android.AndroidBuildPostprocessor.PostProcess
(UnityEditor.Modules.BuildPostProcessArgs args, UnityEditor.BuildProperties& outProperties) (at
<254d6ba8d2224b2793130e21dc037be2>:0)
UnityEditor.PostprocessBuildPlayer.Postprocess (UnityEditor.BuildTargetGroup targetGroup,
UnityEditor.BuildTarget target, System.Int32 subtarget, System.String installPath, System.String
companyName, System.String productName, System.Int32 width, System.Int32 height,
UnityEditor.BuildOptions options, UnityEditor.RuntimeClassRegistry usedClassRegistry,
UnityEditor.Build.Reporting.BuildReport report) (at <99feab6f3db6407493924fe4a179a95b>:0)
UnityEditor.BuildPlayerWindow:BuildPlayerAndRun()

Gradle | Search for Help with Gradle Build Tool