



MOBILE APPLICATION DEV LAB

LAB ASSIGNMENT 01



FEBRUARY 6, 2025

ABDUL AHAD RAZA

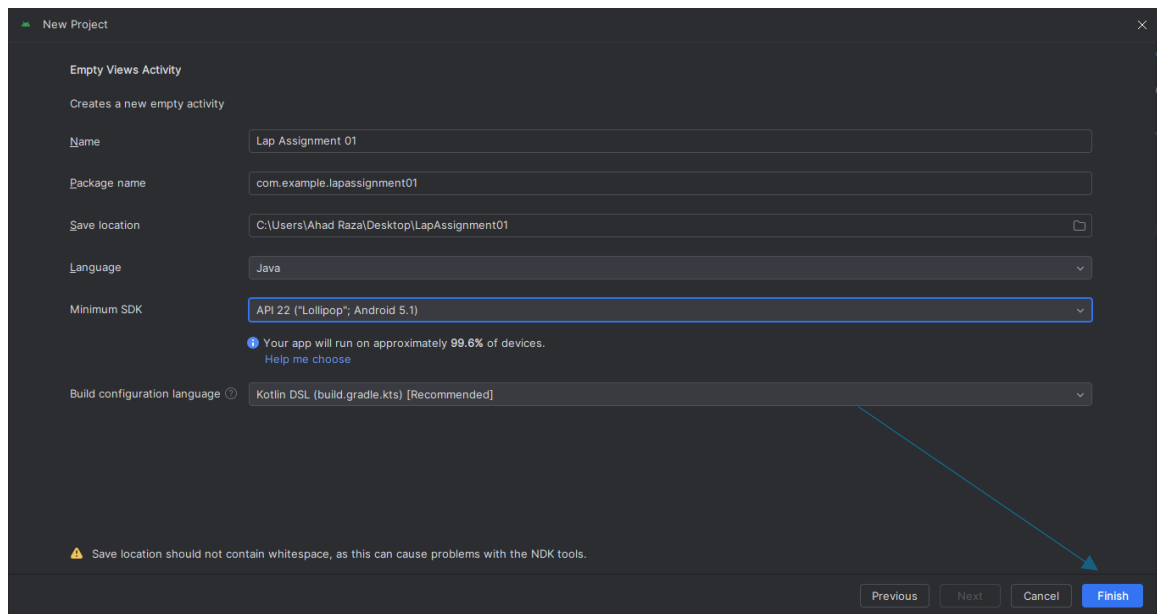
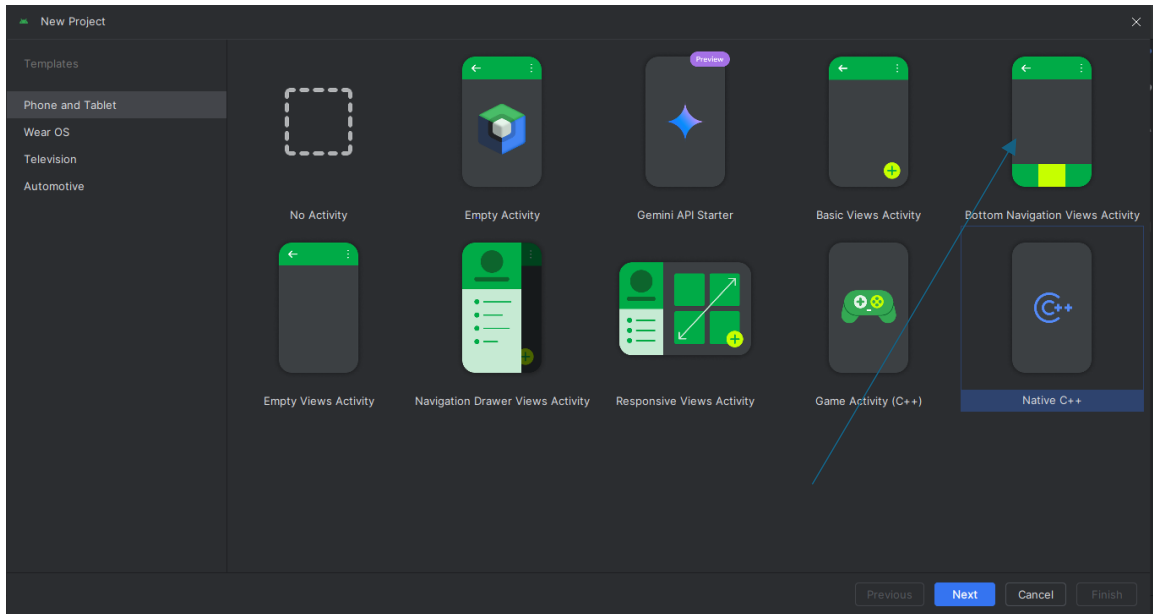
NUML-F21-37114

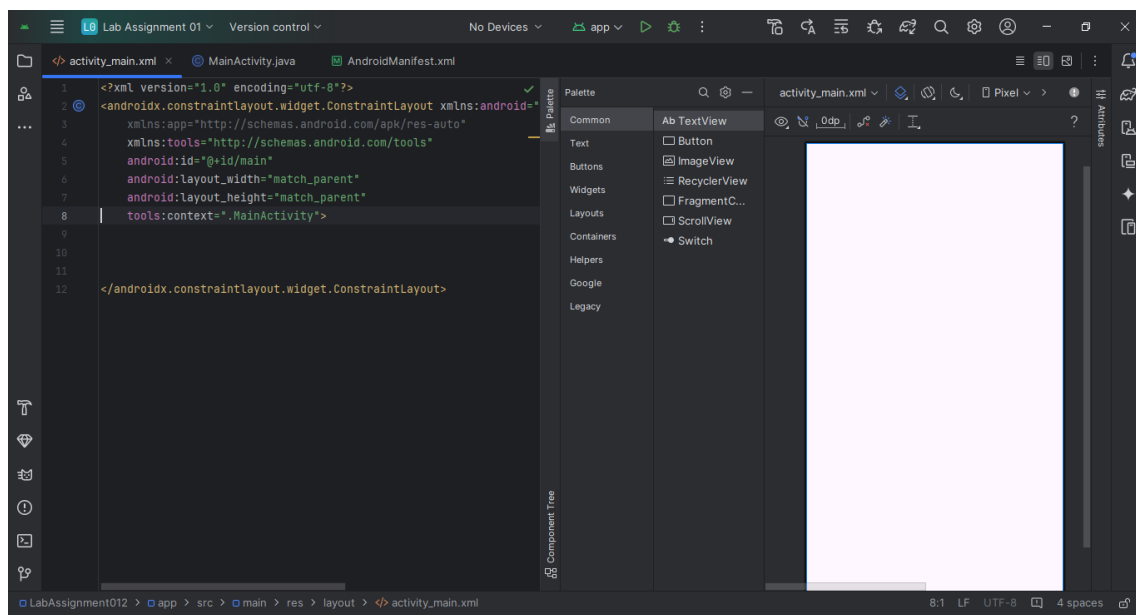
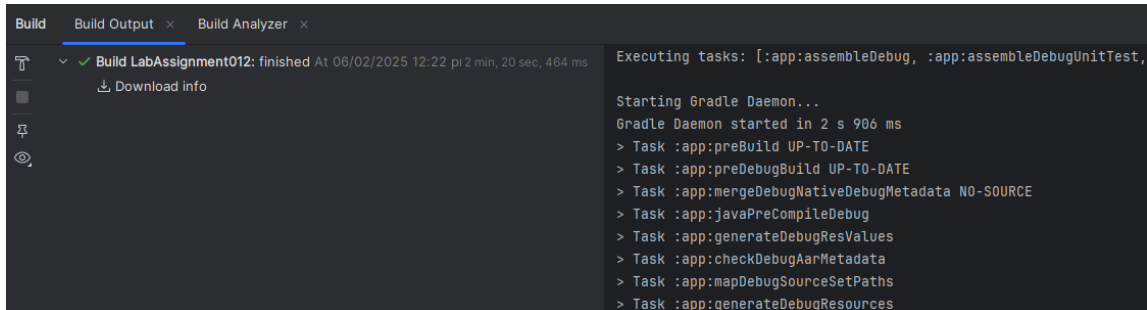
BSCS-36(A)

LAB TASK

- **LAB ASSIGNMENT**

1. Create a new project in Android Studio.





2. Change the "Hello World" greeting to "Happy Birthday to " and the name of someone with a recent birthday.

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:id="@+id/main"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:background="@color/black"
tools:context=".MainActivity">
<TextView
```

```

style="@style/Widget.AppCompat.TextView.SpinnerItem"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Happy Birthday Mr. Ahad Raza"
android:textColor="#FFDFDF"
app:autoSizeTextType="uniform"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.502"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.463" />

```

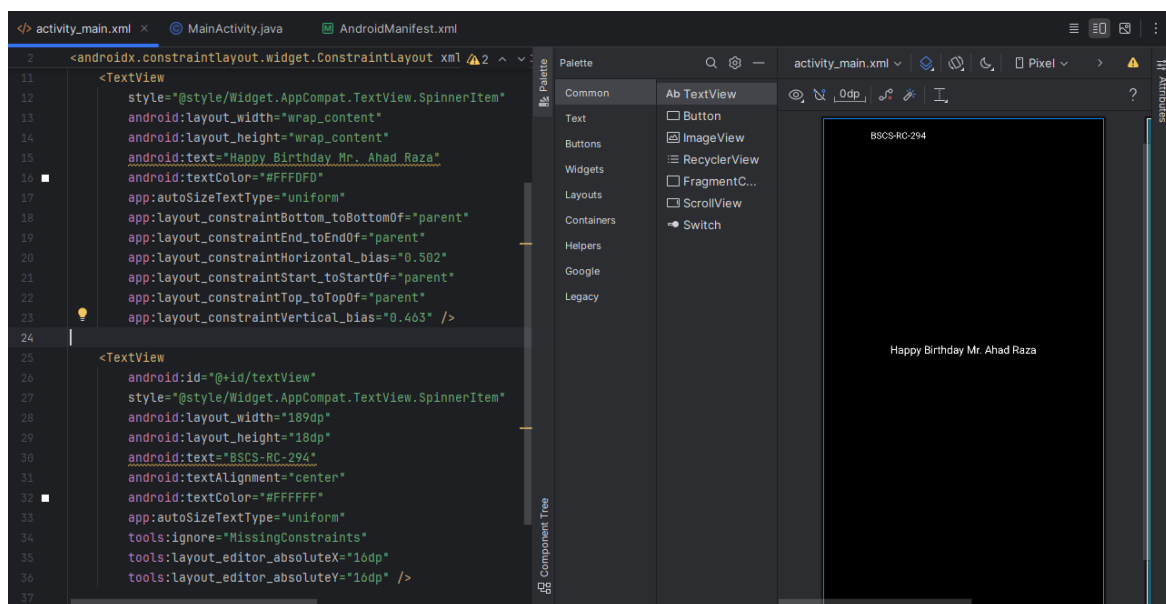
```
<TextView
```

```

    android:id="@+id/textView"
    style="@style/Widget.AppCompat.TextView.SpinnerItem"
    android:layout_width="189dp"
    android:layout_height="18dp"
    android:text="BSCS-RC-294"
    android:textAlignment="center"
    android:textColor="#FFFFFF"
    app:autoSizeTextType="uniform"
    tools:ignore="MissingConstraints"
    tools:layout_editor_absoluteX="16dp"
    tools:layout_editor_absoluteY="16dp" />

```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```



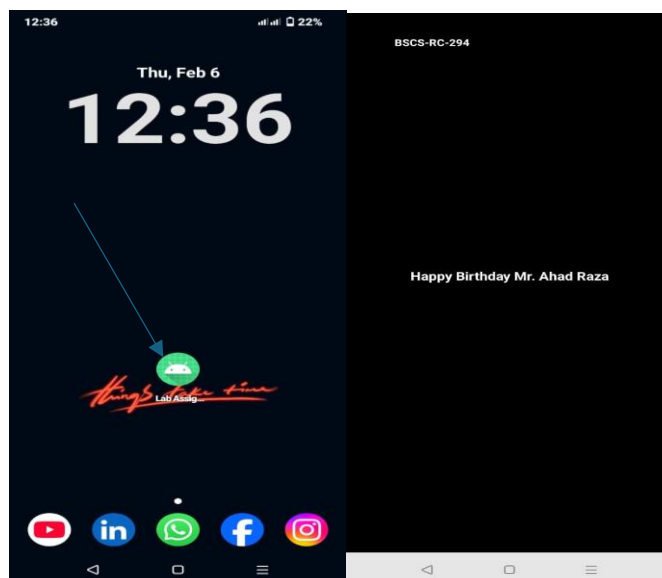
MainActivity.java

```
package com.example.labassignment01;
import android.os.Bundle;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {
            Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);
            return insets;
        });
    }
}
```

Output:



3. A common use of the Log class is to log Java exceptions when they occur in your program. There are some useful methods, such as Log.e(), that you can use for this purpose. Explore methods you can use to include an exception with a Log message. Then, write code in your app to trigger and log an exception.

Program

MainActivity.java

```
package com.example.labassignment01;

import android.os.Bundle;
import android.util.Log; // Import the Log class

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    private static final String TAG = "MainActivity"; // Define a tag for logging

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets)
-> {
            Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });
        Log.e(TAG, "Lab Assignment 01"); // Add the Log.e statement with a tag and
message
    }
}
```

Output:

```

2025-02-06 15:09:04.270 28098-28098 GraphicsEnvironment com.example.labassignment02 V ANGLE: GbmRendererService for com.example.labassignment0
2025-02-06 15:09:04.270 28098-28098 GraphicsEnvironment com.example.labassignment01 V com.example.labassignment01 is not listed in per-appli
2025-02-06 15:09:04.270 28098-28098 GraphicsEnvironment com.example.labassignment01 V Neither updatable production driver nor prerelease dri
2025-02-06 15:09:04.532 28098-28098 AppCompatDelegate com.example.labassignment01 D Checking for metadata for AppLocalesMetadataHolderServ
2025-02-06 15:09:04.688 28098-28098 Labassignment01 com.example.labassignment01 W Accessing hidden method Landroid/view/ViewGroup;->make
2025-02-06 15:09:04.722 28098-28098 Compatibil...geReporter com.example.labassignment01 D Compat change id reported: 210923482; UID 10221; state
2025-02-06 15:09:04.777 28098-28098 MainActivity com.example.labassignment01 E Lab Assignment 01
2025-02-06 15:09:04.837 28098-28098 Compatibil...geReporter com.example.labassignment01 D Compat change id reported: 237531167; UID 10221; state
2025-02-06 15:09:04.842 28098-28098 OpenGLRenderer com.example.labassignment01 W Unknown dataspace 0
2025-02-06 15:09:04.863 28098-28098 Choreographer com.example.labassignment01 I Skipped 31 frames! The application may be doing too m
2025-02-06 15:09:04.909 28098-28130 SomeArgsObtain com.example.labassignment01 V sPoolSize = 0,spool is:null
2025-02-06 15:09:04.918 28098-28203 OpenGLRenderer com.example.labassignment01 E Unable to match the desired swap behavior.
2025-02-06 15:09:04.941 28098-28370 mali_gralloc com.example.labassignment01 I register: id=0x29e00000579, importpid=-1
2025-02-06 15:09:04.944 28098-28370 mali_gralloc com.example.labassignment01 I register: id=0x29e0000057a, importpid=-1
2025-02-06 15:09:04.948 28098-28370 mali_gralloc com.example.labassignment01 I register: id=0x29e0000057b, importpid=-1
2025-02-06 15:09:04.950 28098-28370 mali_gralloc com.example.labassignment01 I register: id=0x29e0000057c, importpid=-1
2025-02-06 15:09:05.056 28098-28098 SomeArgsRecycle com.example.labassignment01 V sPoolSize = 1,spool is:com.android.internal.os.SomeArg
2025-02-06 15:09:05.074 28098-28130 OpenGLRenderer com.example.labassignment01 I Davey! duration=716ms; Flags=1, FrameTimelineVsyncId=1
2025-02-06 15:09:05.101 28098-28124 SomeArgsObtain com.example.labassignment01 V sPoolSize = 1,spool is:com.android.internal.os.SomeArg
2025-02-06 15:09:05.105 28098-28098 SomeArgsRecycle com.example.labassignment01 V sPoolSize = 1,spool is:com.android.internal.os.SomeArg
2025-02-06 15:09:05.960 28098-28114 Labassignment01 com.example.labassignment01 I Compiler allocated 4859KB to compile void android.view
2025-02-06 15:09:10.761 28098-28463 ProfileInstaller com.example.labassignment01 D Installing profile for com.example.labassignment01
2025-02-06 15:09:26.360 28098-28203 mali_gralloc com.example.labassignment01 I unregister: id=0x29e0000057b, base=0x0, importpid=2809
2025-02-06 15:09:26.360 28098-28203 mali_gralloc com.example.labassignment01 I unregister: id=0x29e0000057a, base=0x0, importpid=2809

```