

Animation App-

MainActivity.java-

```
package com.example.zoomactivity;

import androidx.appcompat.app.AppCompatActivity;

import android.animation.Animator;
import android.media.Image;
import android.os.Bundle;
import android.view.View;
import android.view.animation.Animation;
import android.view.animation.AnimationUtils;
import android.widget.Button;
import android.widget.ImageView;

public class MainActivity extends AppCompatActivity {
    Button b1,b2;
    ImageView i1,i2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        b1=findViewById(R.id.btn1);
        b2=findViewById(R.id.btn2);
        i1=findViewById(R.id.img1);
        i2=findViewById(R.id.img2);
        Animation animZoomIn =
        AnimationUtils.loadAnimation(getApplicationContext(),R.anim.zoom_in);
        Animation animZoomOut =
        AnimationUtils.loadAnimation(getApplicationContext(),R.anim.zoom_out);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                i1.startAnimation(animZoomIn);
                i2.startAnimation(animZoomOut);
            }
        });
        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                i2.startAnimation(animZoomIn);
                i1.startAnimation(animZoomOut);
            }
        });
    }
}
```

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:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".MainActivity">

    <Button
```

```
        android:id="@+id/btn1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="80dp"
        android:layout_marginTop="172dp"
        android:text="Button"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/img2" />

<Button
    android:id="@+id/btn2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="172dp"
    android:layout_marginEnd="68dp"
    android:text="Button"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="1.0"
    app:layout_constraintStart_toEndOf="@+id/btn1"
    app:layout_constraintTop_toBottomOf="@+id/img2" />

<ImageView
    android:id="@+id/img1"
    android:layout_width="330dp"
    android:layout_height="181dp"
    android:layout_marginTop="40dp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.493"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:srcCompat="@drawable/a1" />

<ImageView
    android:id="@+id/img2"
    android:layout_width="337dp"
    android:layout_height="183dp"
    android:layout_marginTop="20dp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.54"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/img1"
    app:srcCompat="@drawable/a2" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

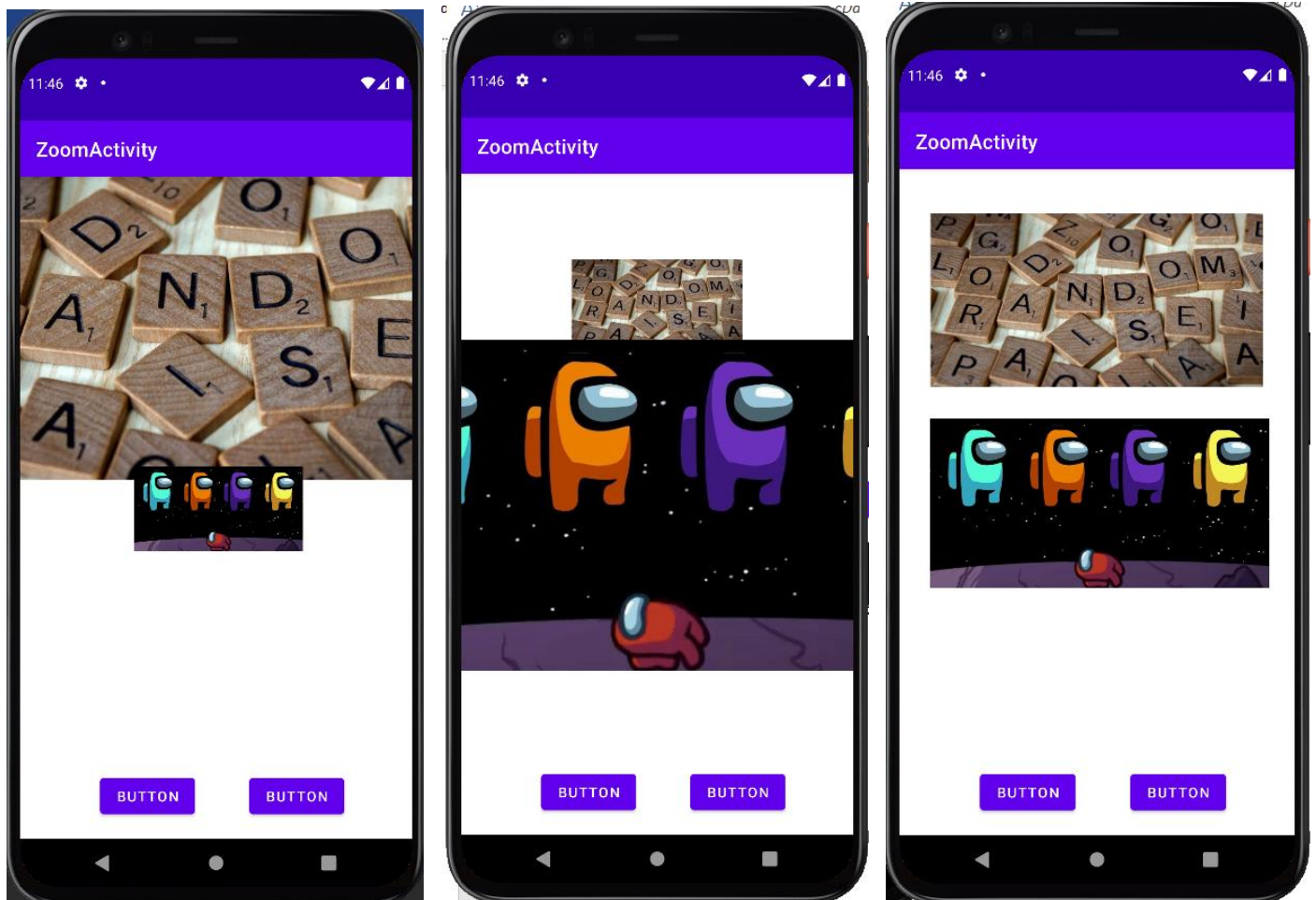
Zoom in.xml-

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
    <scale
        xmlns:android="http://schemas.android.com/apk/res/android"
        android:duration="1000"
        android:fromXScale="1"
        android:fromYScale="1"
        android:pivotX="50%"
        android:pivotY="50%"
        android:toXScale="2"
        android:toYScale="2" />
</set>
```

Zoom out.xml-

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
    <scale
        android:duration="1000"
        android:fromXScale="1.0"
        android:fromYScale="1.0"
        android:pivotX="50%"
        android:pivotY="50%"
        android:toXScale=".5"
        android:toYScale=".5" />
</set>
```

Output-



_FloatingActionButton-

MainActivity.java-

```
package com.lab7.floatingactionsbutton;
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;

import com.google.android.material.floatingactionbutton.FloatingActionButton;

public class MainActivity extends AppCompatActivity {
    FloatingActionButton f1,f2,f3,f4,f5,f6,f7,f8,f9,f10;
    int i=0,x=0,y=0,z=0;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        f1 = findViewById(R.id.floatingActionButton1);
        f2 = findViewById(R.id.floatingActionButton2);
        f3 = findViewById(R.id.floatingActionButton3);
        f4 = findViewById(R.id.floatingActionButton4);
        f5 = findViewById(R.id.floatingActionButton5);
        f6 = findViewById(R.id.floatingActionButton6);
        f7 = findViewById(R.id.floatingActionButton7);
        f8 = findViewById(R.id.floatingActionButton8);
        f9 = findViewById(R.id.floatingActionButton9);
        f10 = findViewById(R.id.floatingActionButton10);

        f2.setVisibility(View.INVISIBLE);
        f3.setVisibility(View.INVISIBLE);
        f4.setVisibility(View.INVISIBLE);
        f5.setVisibility(View.INVISIBLE);
        f6.setVisibility(View.INVISIBLE);
        f7.setVisibility(View.INVISIBLE);
        f8.setVisibility(View.INVISIBLE);
        f9.setVisibility(View.INVISIBLE);
        f10.setVisibility(View.INVISIBLE);

        f1.setOnClickListener((v -> {
            if(i==0){
                f2.setVisibility(View.VISIBLE);
                f3.setVisibility(View.VISIBLE);
                f4.setVisibility(View.VISIBLE);
                i=1;
            }
            else{
                f2.setVisibility(View.INVISIBLE);
                f3.setVisibility(View.INVISIBLE);
                f4.setVisibility(View.INVISIBLE);
                f5.setVisibility(View.INVISIBLE);
                f6.setVisibility(View.INVISIBLE);
                f7.setVisibility(View.INVISIBLE);
                f8.setVisibility(View.INVISIBLE);
                f9.setVisibility(View.INVISIBLE);
                f10.setVisibility(View.INVISIBLE);
                i=x=y=z=0;
            }
        }));
        f2.setOnClickListener((v -> {
            if(x==0){
                f5.setVisibility(View.VISIBLE);
                f8.setVisibility(View.VISIBLE);
            }
        }));
    }
}
```

```
        x=1;
    }
    else{
        f5.setVisibility(View.INVISIBLE);
        f8.setVisibility(View.INVISIBLE);
        x=0;
    }
    }));
f3.setOnClickListener((v -> {
    if(y==0){
        f6.setVisibility(View.VISIBLE);
        f9.setVisibility(View.VISIBLE);
        y=1;
    }
    else{
        f6.setVisibility(View.INVISIBLE);
        f9.setVisibility(View.INVISIBLE);
        y=0;
    }
    }));
f4.setOnClickListener((v -> {
    if(z==0){
        f7.setVisibility(View.VISIBLE);
        f10.setVisibility(View.VISIBLE);
        z=1;
    }
    else{
        f7.setVisibility(View.INVISIBLE);
        f10.setVisibility(View.INVISIBLE);
        z=0;
    }
    }));
    }
}
```

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:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".MainActivity">

    <com.google.android.material.floatingactionbutton.FloatingActionButton
        android:id="@+id/floatingActionButton2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginEnd="24dp"
        android:layout_marginRight="24dp"
        android:layout_marginBottom="32dp"
        android:clickable="true"
        android:src="@drawable/abc_vector_test"
        app:layout_constraintBottom_toBottomOf="@+id/floatingActionButton1"
        app:layout_constraintEnd_toStartOf="@+id/floatingActionButton1" />

    <com.google.android.material.floatingactionbutton.FloatingActionButton
        android:id="@+id/floatingActionButton3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="26dp"
        android:clickable="true"
```

```
    android:src="@android:drawable/ic_media_play"
    app:layout_constraintBottom_toTopOf="@+id/floatingActionButton2"
    app:layout_constraintEnd_toEndOf="@+id/floatingActionButton2" />
```

```
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/floatingActionButton4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginBottom="22dp"
    android:clickable="true"
    android:src="@android:drawable/stat_sys_phone_call"
    app:layout_constraintBottom_toTopOf="@+id/floatingActionButton3"
    app:layout_constraintEnd_toEndOf="@+id/floatingActionButton3" />
```

```
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/floatingActionButton5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginEnd="32dp"
    android:layout_marginRight="32dp"
    android:clickable="true"
    android:src="@android:drawable/ic_lock_silent_mode"
    app:layout_constraintEnd_toStartOf="@+id/floatingActionButton2"
    app:layout_constraintTop_toTopOf="@+id/floatingActionButton2" />
```

```
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/floatingActionButton6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginEnd="32dp"
    android:layout_marginRight="32dp"
    android:clickable="true"
    android:src="@android:drawable/ic_media_ff"
    app:layout_constraintEnd_toStartOf="@+id/floatingActionButton3"
    app:layout_constraintTop_toTopOf="@+id/floatingActionButton3" />
```

```
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/floatingActionButton7"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginEnd="32dp"
    android:layout_marginRight="32dp"
    android:clickable="true"
    android:src="@android:drawable/stat_sys_phone_call_on_hold"
    app:layout_constraintEnd_toStartOf="@+id/floatingActionButton4"
    app:layout_constraintTop_toTopOf="@+id/floatingActionButton4" />
```

```
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/floatingActionButton8"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginEnd="24dp"
    android:layout_marginRight="24dp"
    android:clickable="true"
    android:src="@android:drawable/ic_lock_silent_mode_off"
    app:layout_constraintEnd_toStartOf="@+id/floatingActionButton5"
    app:layout_constraintTop_toTopOf="@+id/floatingActionButton5" />
```

```
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/floatingActionButton9"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginEnd="24dp"
    android:layout_marginRight="24dp"
    android:clickable="true"
    android:src="@android:drawable/ic_media_pause"
```

```
app:layout_constraintEnd_toStartOf="@+id/floatingActionButton6"
app:layout_constraintTop_toTopOf="@+id/floatingActionButton6" />
```

```
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/floatingActionButton10"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginEnd="24dp"
    android:layout_marginRight="24dp"
    android:clickable="true"
    android:src="@android:drawable/stat_sys_phone_call_forward"
    app:layout_constraintEnd_toStartOf="@+id/floatingActionButton7"
    app:layout_constraintTop_toTopOf="@+id/floatingActionButton7" />
```

```
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/floatingActionButton1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginEnd="27dp"
    android:layout_marginRight="27dp"
    android:layout_marginBottom="88dp"
    android:clickable="true"
    android:src="@android:drawable/ic_input_add"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent" />
```

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

