

# ◆ PROPOSE

Android Mobile touch motion

Propose *Mobile touch motion*



Jae  
Woong  
Oh



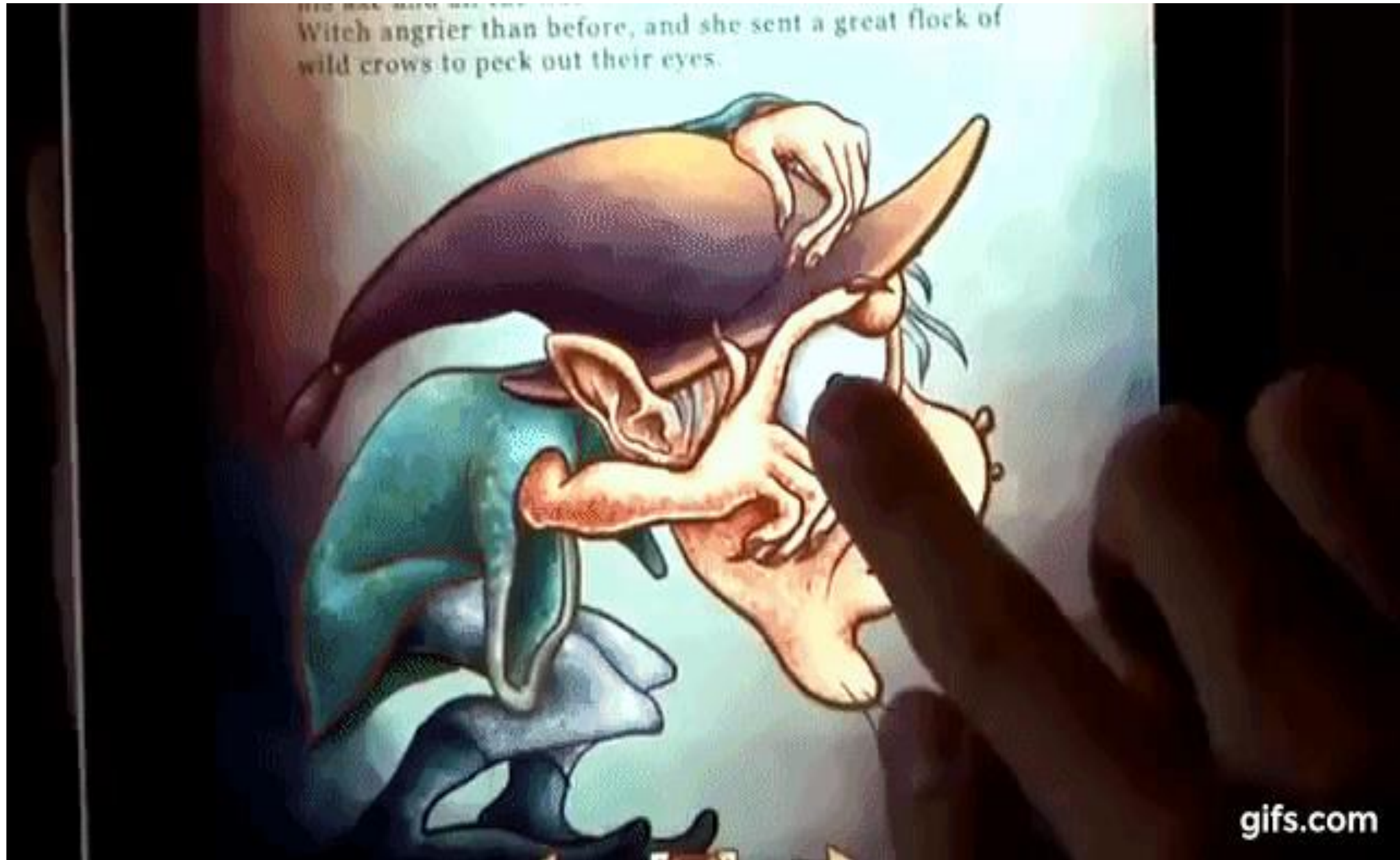
PROPOSE (プロポーズ)





Propose Mobile touch motion

## Motion E-BOOK



Propose Mobile touch motion

$$a \sin \theta + b \cos \theta = \sqrt{a^2 + b^2} \sin(\theta + \alpha)$$

$$= \sqrt{a^2 + b^2} \cos(\theta - \beta)$$

$$\left( \begin{aligned} \sin \alpha &= \frac{a}{\sqrt{a^2 + b^2}} \\ \cos \beta &= \frac{b}{\sqrt{a^2 + b^2}} \end{aligned} \right)$$

$$\left( \begin{aligned} \cos \alpha &= \frac{b}{\sqrt{a^2 + b^2}} \\ \sin \beta &= \frac{a}{\sqrt{a^2 + b^2}} \end{aligned} \right)$$

Coordinate  
calculation

Physics  
calculation

Touch  
Pattern

Motion  
**It's too difficult**

Etc

Interaction



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#람

#대상상금

#남편수상

#구찌

#행복함





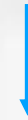
# Propose Mobile touch motion

Motion Development

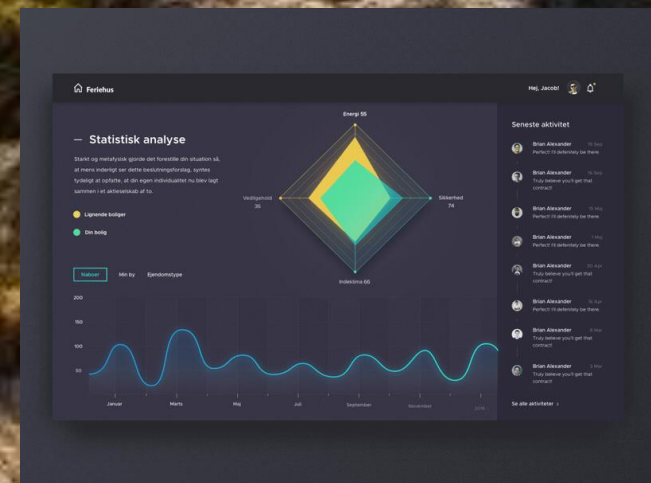
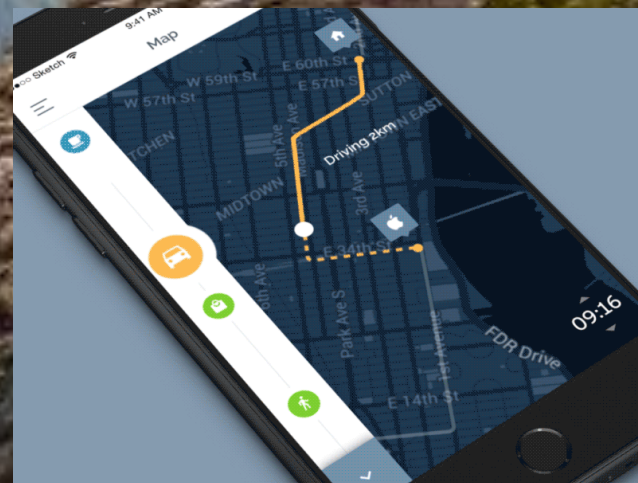
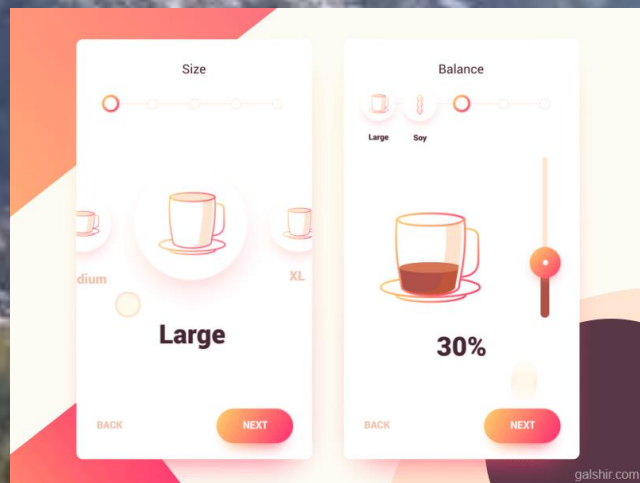


## 必ず越えなければならない山!

App



Developer







# Propose Mobile touch motion

# Easy

# Code less

```
if ((Build.VERSION.SDK_INT >= 21) && getBackground() == null) {
    setBackgroundResource(R.drawable.control_background_multi_material);
}

mUiThreadId = Thread.currentThread().getId();

a = context.obtainStyledAttributes(attrs, io.apptik.widget.mslider.R.styleable.MultiSlider,
    defStyle, styleRes);
mNoInvalidate = true;
int numThumbs = a.getInt(io.apptik.widget.mslider.R.styleable.MultiSlider_thumbNumber, 2);
initMultiSlider(numThumbs);

Drawable trackDrawable = a.getDrawable(io.apptik.widget.mslider.R.styleable
    .MultiSlider_android_track);
if (trackDrawable == null) {
    trackDrawable = ContextCompat.getDrawable(getContext(),
        R.drawable.multislider_track_material
    );
}

setTrackDrawable(getTintedDrawable(trackDrawable, a.getColor(io.apptik.widget.mslider.R.styleable.MultiSlider_
    mMinWidth = a.getDimensionPixelSize(R.styleable.MultiSlider_minWidth, mMinWidth);
mMaxWidth = a.getDimensionPixelSize(R.styleable.MultiSlider_maxWidth, mMaxWidth);
mMinHeight = a.getDimensionPixelSize(R.styleable.MultiSlider_minHeight, mMinHeight);
mMaxHeight = a.getDimensionPixelSize(R.styleable.MultiSlider_maxHeight, mMaxHeight);

setStep(a.getInt(io.apptik.widget.mslider.R.styleable.MultiSlider_scaleStep, mStep));
setStepsThumbsApart(a.getInt(io.apptik.widget.mslider.R.styleable
    .MultiSlider_stepsThumbsApart,
    mStepsThumbsApart));
setDrawThumbsApart(a.getBoolean(io.apptik.widget.mslider.R.styleable
    .MultiSlider_drawThumbsApart,
    mDrawThumbsApart));
setMax(a.getInt(io.apptik.widget.mslider.R.styleable.MultiSlider_scaleMax, mScaleMax), true);
setMin(a.getInt(io.apptik.widget.mslider.R.styleable.MultiSlider_scaleMin, mScaleMin), true);

mMirrorForRtl = a.getBoolean(io.apptik.widget.mslider.R.styleable.MultiSlider_mirrorForRTL,
    mMirrorForRtl);

// --> now place thumbs

defThumbDrawable = a.getDrawable(io.apptik.widget.mslider.R.styleable
    .MultiSlider_android_thumb);

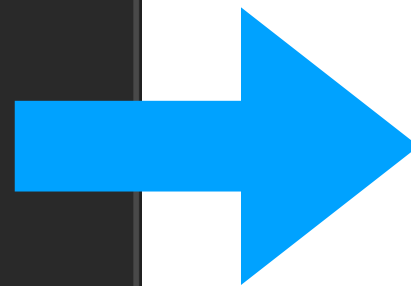
if (defThumbDrawable == null) {
    if (Build.VERSION.SDK_INT >= 21) {
        defThumbDrawable = ContextCompat.getDrawable(getContext(), R.drawable.multislider_thumb_material_anim)
    } else {
        defThumbDrawable = ContextCompat.getDrawable(getContext(), R.drawable.multislider_thumb_material);
    }
}

defRangeDrawable = a.getDrawable(io.apptik.widget.mslider.R.styleable
    .MultiSlider_range);
if (defRangeDrawable == null) {
    defRangeDrawable = ContextCompat.getDrawable(getContext(),
        R.drawable.multislider_range_material
    );
}

Drawable range1Drawable = a.getDrawable(io.apptik.widget.mslider.R.styleable
    .MultiSlider_range1);
Drawable range2Drawable = a.getDrawable(io.apptik.widget.mslider.R.styleable
    .MultiSlider_range2);

defRangeColor = a.getColor(io.apptik.widget.mslider.R.styleable.MultiSlider_rangeColor, 0);
defThumbColor = a.getColor(io.apptik.widget.mslider.R.styleable.MultiSlider_thumbColor, 0);
setThumbDrawables(defThumbDrawable, defRangeDrawable, range1Drawable, range2Drawable); //

int thumbOffset = a.getDimensionPixelOffset(io.apptik.widget.mslider.R.styleable
    .MultiSlider_android_thumbOffset, defThumbDrawable.getIntrinsicWidth() / 2);
setThumbOffset(thumbOffset);
```



```
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.main_layout);
    ViewGroup move_lyt = (ViewGroup) findViewById(R.id.move_lyt);

    ObjectAnimator paperAnim = ObjectAnimator.ofFloat(move_lyt, View.ROTATION_Y, 0, 180);

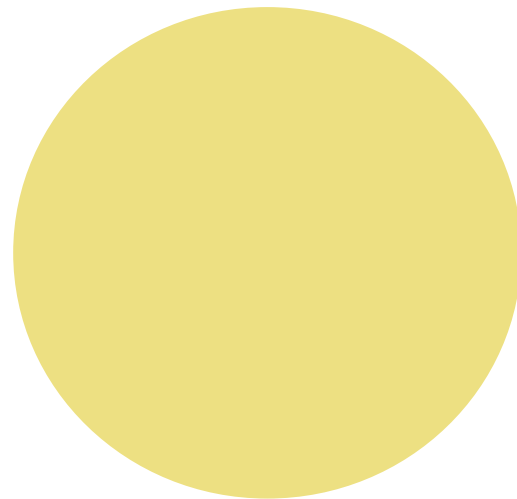
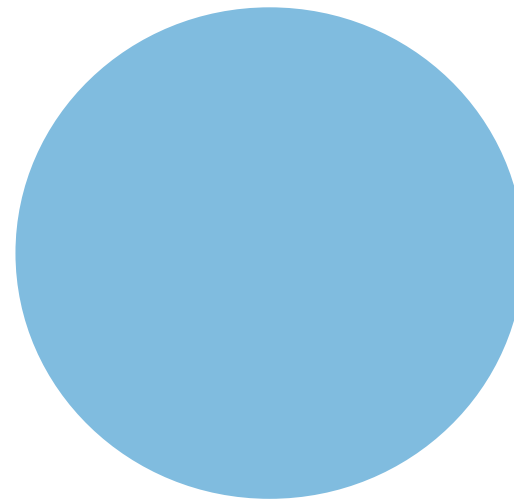
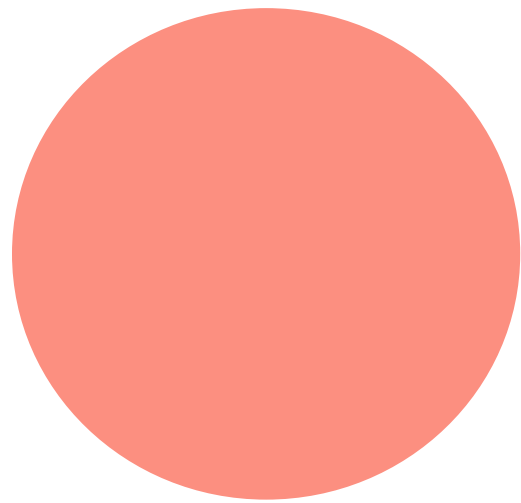
    Propose propose = new Propose(this);
    propose.motionRight.play(paperAnim);
    move_lyt.setOnTouchListener(propose);
}
```

<https://github.com/muabe/Samples/blob/master/paper/src/com/markmind/propose/sample/paper/MainActivity.java>

# Combination

RGB Three colors make all the colors of the world


motion A + motion B = motion C






# Propose Mobile touch motion



 **jaggi772** <notifications@github.com> 9월 6일 ☆  
muabe/Propose, 나, Mention에게 ▾


@muabe i have tried to make animate like <https://www.youtube.com/watch?v=X0x4wgDQV20> shown video but no success. I need this type of animation. Plz help.

 **Plantaer** <notifications@github.com> 7월 24일 ☆  
muabe/Propose, Subscribed에게 ▾

I'm really excited about this library. More immersive apps is what i want to achieve. Could you please share with Cube Out Transform ([https://www.youtube.com/watch?v=K\\_5Y16Fz0Ps](https://www.youtube.com/watch?v=K_5Y16Fz0Ps)) project or something similar?

1. I don't understand how split one object (like circular ImageView on video) between left drawer and different Layout. How is it attached?
2. In Story Book on video (hadn't found sample code), how to transform only a half of Layout, View (whatever it is)? I mean page of the book.

Thank you in advance for your help.

 **josyjanga** <notifications@github.com> 수신거부 16. 1. 25. ☆  
JaeWoongOh/And.에게 ▾

Hi, the library works really nice I have downloaded the storybook example and would like to know, how the 3D effect, when touching the book, can be disabled? I don't want it to be moved in y-direction

# Impossible

In this figure we see two similar triangles, both having (green) as their hypotenuses. The catheti of the left triangle are  $x_1$  and  $x_3$ . Since it follows that

$$\frac{-y_1}{f} = \frac{x_1}{x_3} \text{ or } y_1 = -\frac{f x_1}{x_3}$$

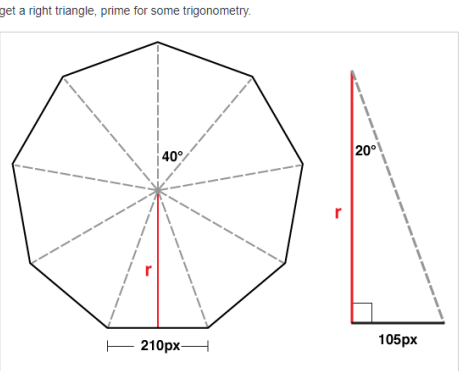
A similar investigation, looking in the negative direction,

$$\frac{-y_2}{f} = \frac{x_2}{x_3} \text{ or } y_2 = -\frac{f x_2}{x_3}$$

This can be summarized as

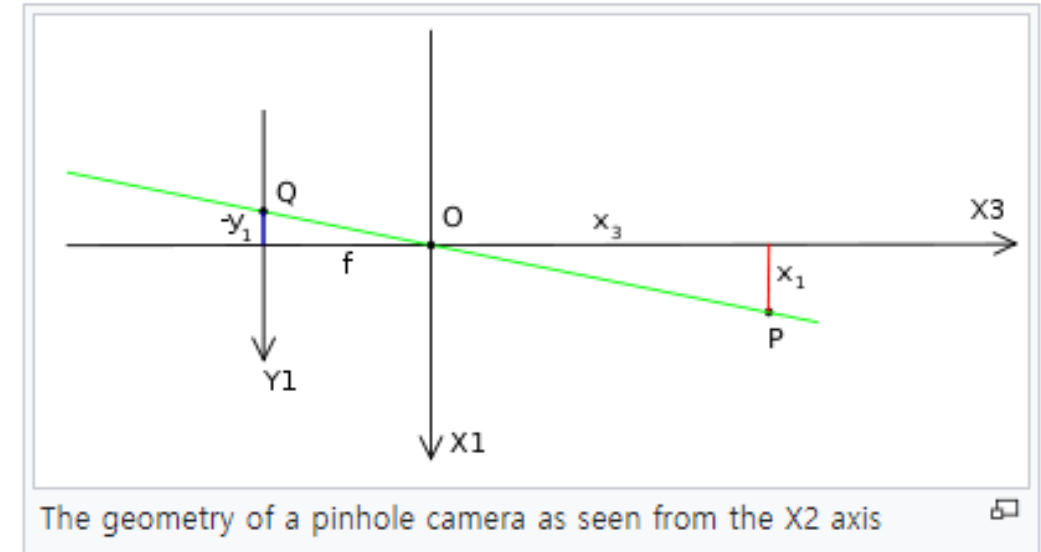
$$\begin{pmatrix} y_1 \\ y_2 \end{pmatrix} = -\frac{f}{x_3} \begin{pmatrix} x_1 \\ x_2 \end{pmatrix}$$

which is an expression that describes the relation between the 3D coordinates  $(x_1, x_2, x_3)$  of point P and its image coordinates  $(y_1, y_2)$  given by point Q in the image plane.



We can determine the length of r in this diagram with a basic tangent equation.

$$\begin{aligned} \tan &= \frac{\text{opposite}}{\text{adjacent}} \\ \tan(20^\circ) &= \frac{105\text{px}}{r} \\ r &= \frac{105\text{px}}{\tan(20^\circ)} \\ r &= 288\text{px} \end{aligned}$$



## Rotated image and the virtual image plane [\[edit\]](#)

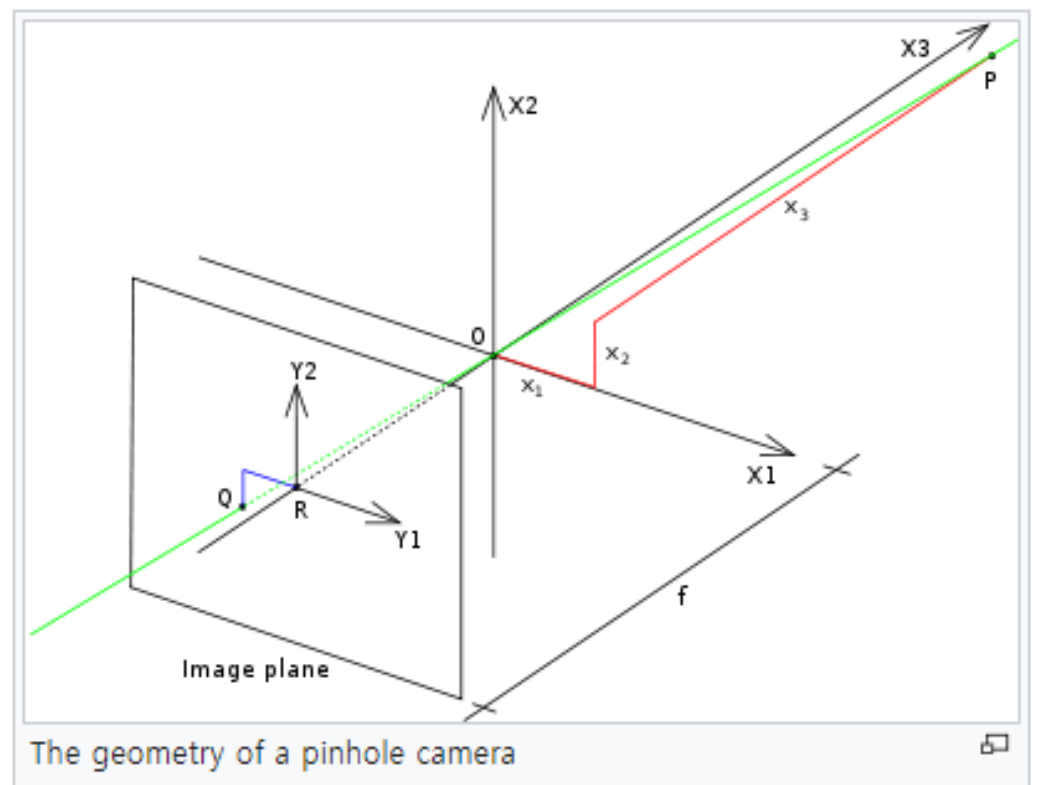
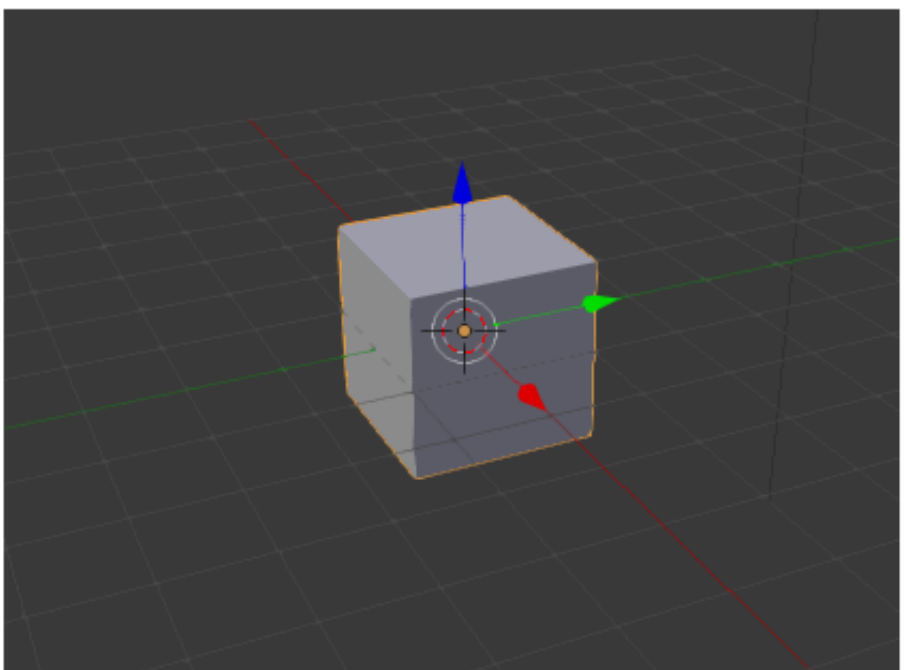
The mapping from 3D to 2D... This corresponds to how their distance to the focus to produce an unrotated image.

- Rotate the coordinate system such that the image plane is parallel to the X1-X2 plane.
- Place the image plane at a distance f from the origin.

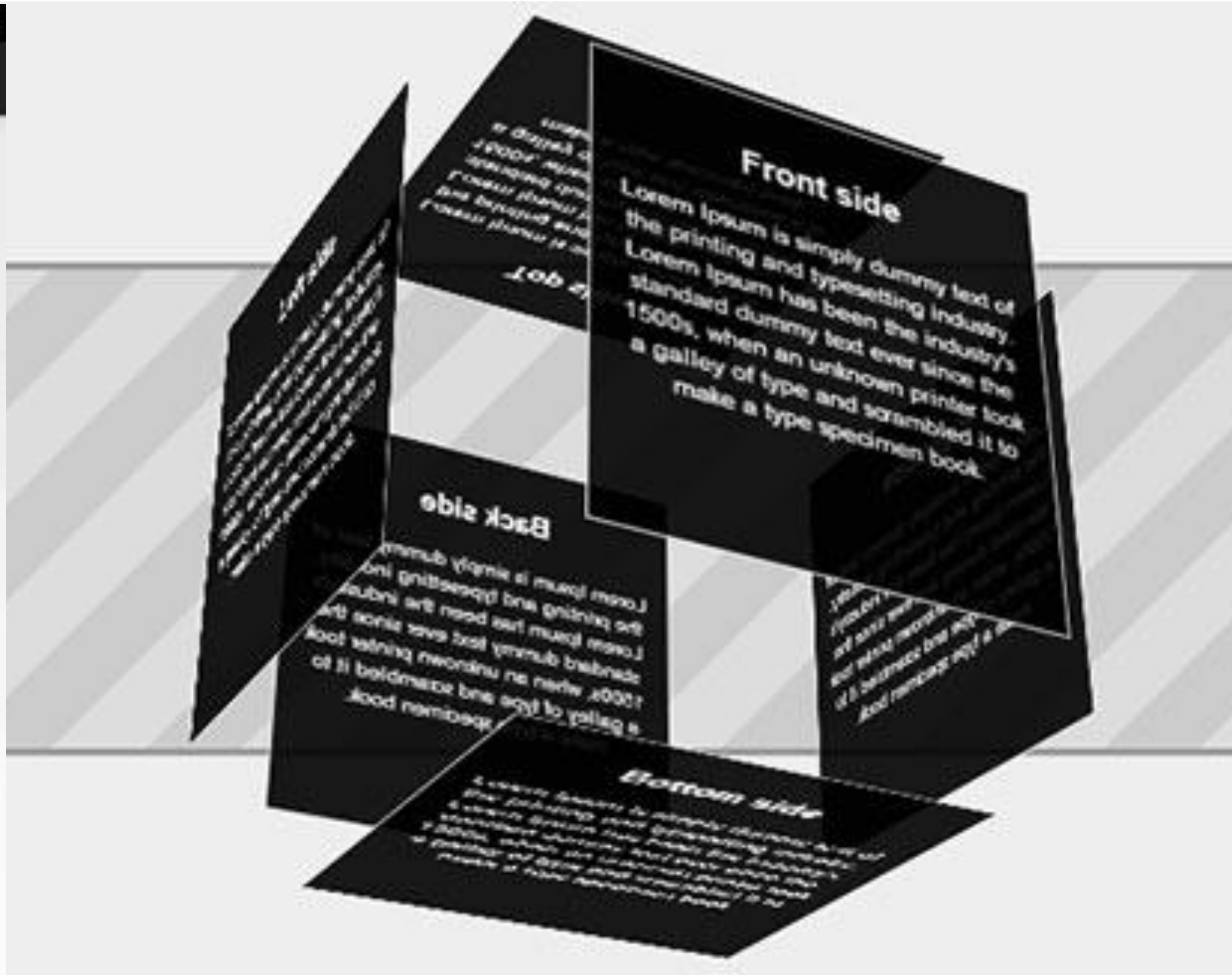
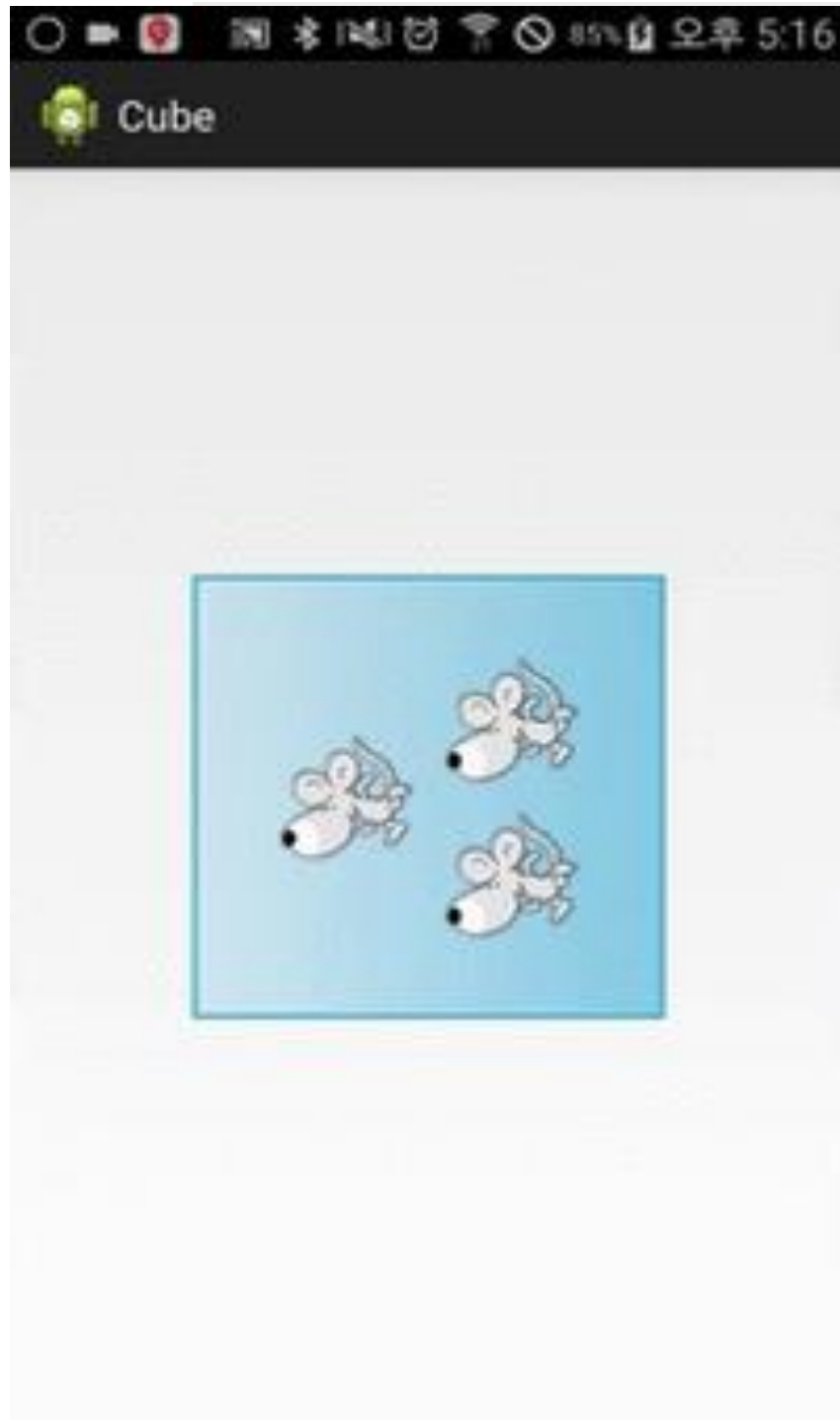
In both cases, the result

$$\begin{pmatrix} y_1 \\ y_2 \end{pmatrix} = \frac{f}{x_3} \begin{pmatrix} x_1 \\ x_2 \end{pmatrix}$$

This is the code for my `GLSurfaceView.Renderer`



# Propose Mobile touch motion



[https://github.com/muabe/Samples/tree/master/propose\\_cube](https://github.com/muabe/Samples/tree/master/propose_cube)



# Combination

**motion1.play(anim1).with(anim2).with(anim3).next(anim3)**

**Combine.all(motion1, motion2).or(motion3, motion4)**

# Code less

```
if ((Build.VERSION.SDK_INT >= 21) && getBackground() == null) {
    setBackgroundResource(R.drawable.control_background_multi_material);
}

mUiThreadId = Thread.currentThread().getId();

a = context.obtainStyledAttributes(attrs, io.apptik.widget.mslider.R.styleable.MultiSlider,
    defStyle, styleRes);
mNoInvalidate = true;
int numThumbs = a.getInt(io.apptik.widget.mslider.R.styleable.MultiSlider_thumbNumber, 2);
initMultiSlider(numThumbs);

Drawable trackDrawable = a.getDrawable(io.apptik.widget.mslider.R.styleable
    .MultiSlider_android_track);
if (trackDrawable == null) {
    trackDrawable = ContextCompat.getDrawable(getContext(),
        R.drawable.multislider_track_material
    );
}

setTrackDrawable(getTintedDrawable(trackDrawable, a.getColor(io.apptik.widget.mslider.R.styleable.MultiSlider_
    mMinWidth = a.getDimensionPixelSize(R.styleable.MultiSlider_minWidth, mMinWidth);
mMaxWidth = a.getDimensionPixelSize(R.styleable.MultiSlider_maxWidth, mMaxWidth);
mMinHeight = a.getDimensionPixelSize(R.styleable.MultiSlider_minHeight, mMinHeight);
mMaxHeight = a.getDimensionPixelSize(R.styleable.MultiSlider_maxHeight, mMaxHeight);

setStep(a.getInt(io.apptik.widget.mslider.R.styleable.MultiSlider_scaleStep, mStep));
setStepsThumbsApart(a.getInt(io.apptik.widget.mslider.R.styleable
    .MultiSlider_stepsThumbsApart,
    mStepsThumbsApart));
setDrawThumbsApart(a.getBoolean(io.apptik.widget.mslider.R.styleable
    .MultiSlider_drawThumbsApart,
    mDrawThumbsApart));
setMax(a.getInt(io.apptik.widget.mslider.R.styleable.MultiSlider_scaleMax, mScaleMax), true);
setMin(a.getInt(io.apptik.widget.mslider.R.styleable.MultiSlider_scaleMin, mScaleMin), true);

mMirrorForRtl = a.getBoolean(io.apptik.widget.mslider.R.styleable.MultiSlider_mirrorForRTL,
    mMirrorForRtl);

// --> now place thumbs

defThumbDrawable = a.getDrawable(io.apptik.widget.mslider.R.styleable
    .MultiSlider_android_thumb);

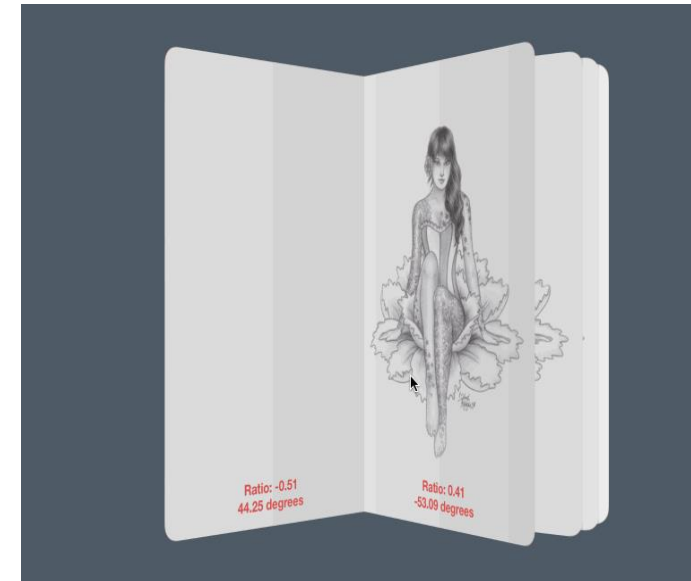
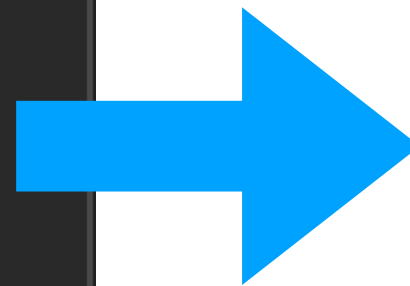
if (defThumbDrawable == null) {
    if (Build.VERSION.SDK_INT >= 21) {
        defThumbDrawable = ContextCompat.getDrawable(getContext(), R.drawable.multislider_thumb_material_anim)
    } else {
        defThumbDrawable = ContextCompat.getDrawable(getContext(), R.drawable.multislider_thumb_material);
    }
}

defRangeDrawable = a.getDrawable(io.apptik.widget.mslider.R.styleable
    .MultiSlider_range);
if (defRangeDrawable == null) {
    defRangeDrawable = ContextCompat.getDrawable(getContext(),
        R.drawable.multislider_range_material
    );
}

Drawable range1Drawable = a.getDrawable(io.apptik.widget.mslider.R.styleable
    .MultiSlider_range1);
Drawable range2Drawable = a.getDrawable(io.apptik.widget.mslider.R.styleable
    .MultiSlider_range2);

defRangeColor = a.getColor(io.apptik.widget.mslider.R.styleable.MultiSlider_rangeColor, 0);
defThumbColor = a.getColor(io.apptik.widget.mslider.R.styleable.MultiSlider_thumbColor, 0);
setThumbDrawables(defThumbDrawable, defRangeDrawable, range1Drawable, range2Drawable); //

int thumbOffset = a.getDimensionPixelOffset(io.apptik.widget.mslider.R.styleable
    .MultiSlider_android_thumbOffset, defThumbDrawable.getIntrinsicWidth() / 2);
setThumbOffset(thumbOffset);
```



```
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.main_layout);
    ViewGroup move_lyt = (ViewGroup) findViewById(R.id.move_lyt);

    ObjectAnimator paperAnim = ObjectAnimator.ofFloat(move_lyt, View.ROTATION_Y, 0, 180);

    Propose propose = new Propose(this);
    propose.motionRight.play(paperAnim);
    move_lyt.setOnTouchListener(propose);
}
```

<https://github.com/muabe/Samples/blob/master/paper/src/com/markjmind/propose/sample/paper/MainActivity.java>

A large group of stylized human figures holding hands in a circle, symbolizing unity and community. The figures are rendered in a light blue color against a background of a bright, hazy sky with a large, faint pyramid or mountain shape in the distance. The overall tone is positive and collaborative.

Propose v2.0



# Propose v2.0

Do Combine everything in world



# Plug-In

Propose

Touch  
motion



애니메이션

# Plug-In

Player

Touch  
motion



Sound  
Lottie  
Animation  
Etc output

...

...

...

...



# Plug-In

Action

Touch  
Sound  
압력  
Gyro sensor  
Acceler

...

...

...



Combination



Player

Sound  
Lottie  
Animation  
Etc output

...

...

...

...



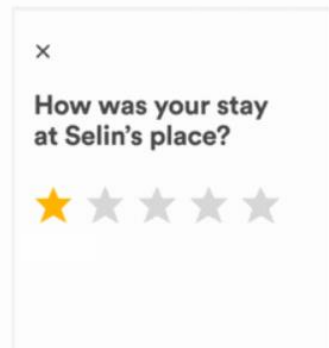
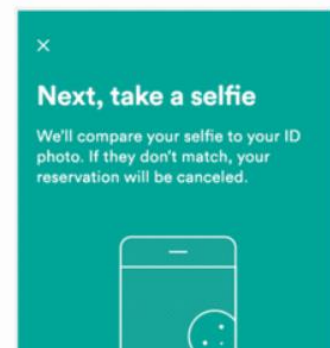
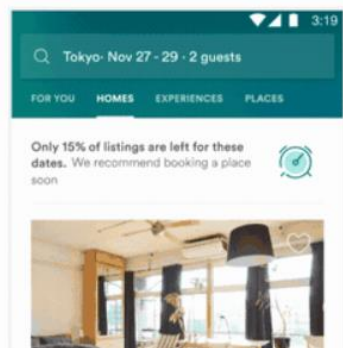
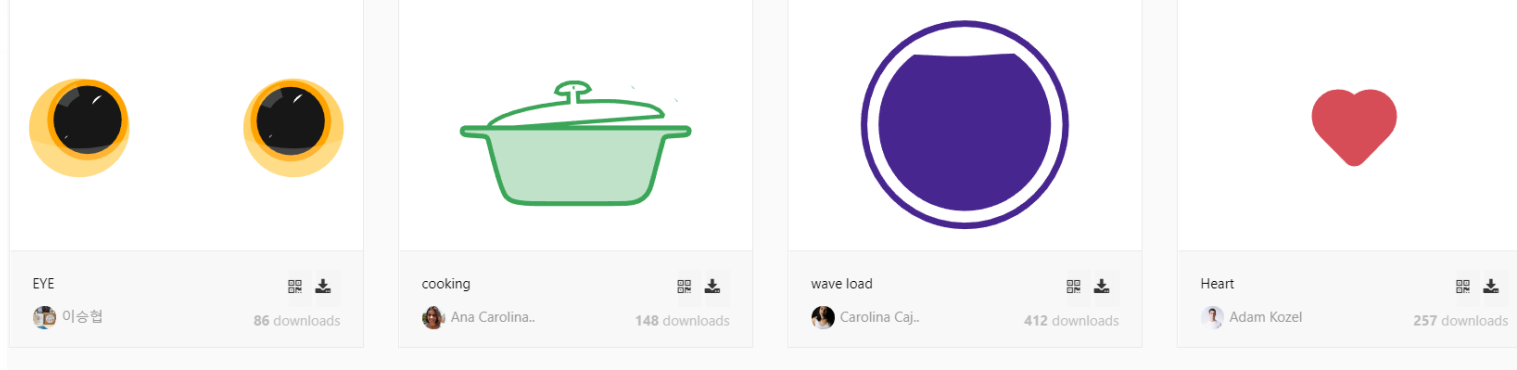
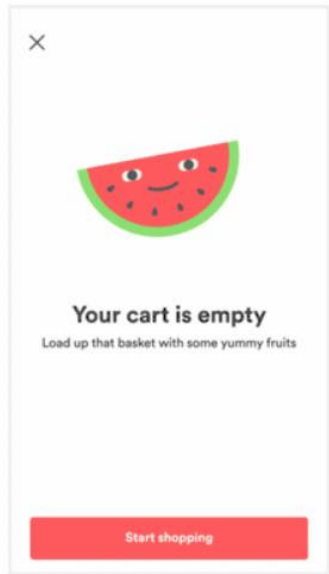
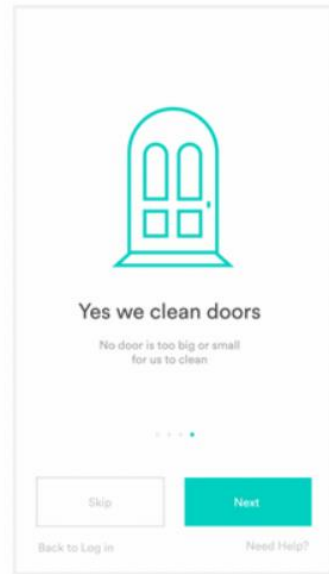
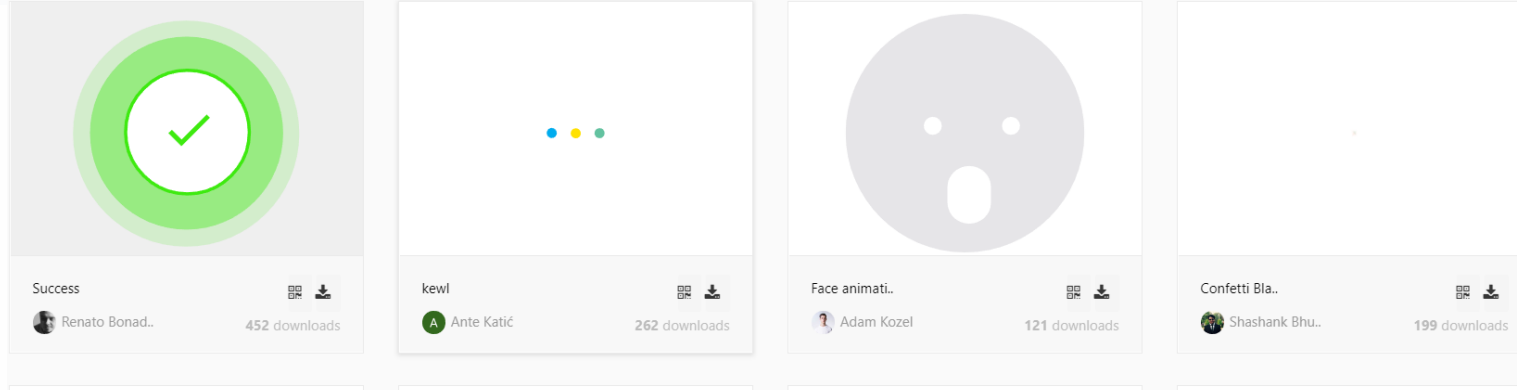


# Airbnb Lottie

airbnb / lottie-android

Watch 762 Star 22,706 Fork 3,541

Code Issues 26 Pull requests 2 Insights



<https://github.com/airbnb/lottie-android>  
<https://www.lottiefiles.com>











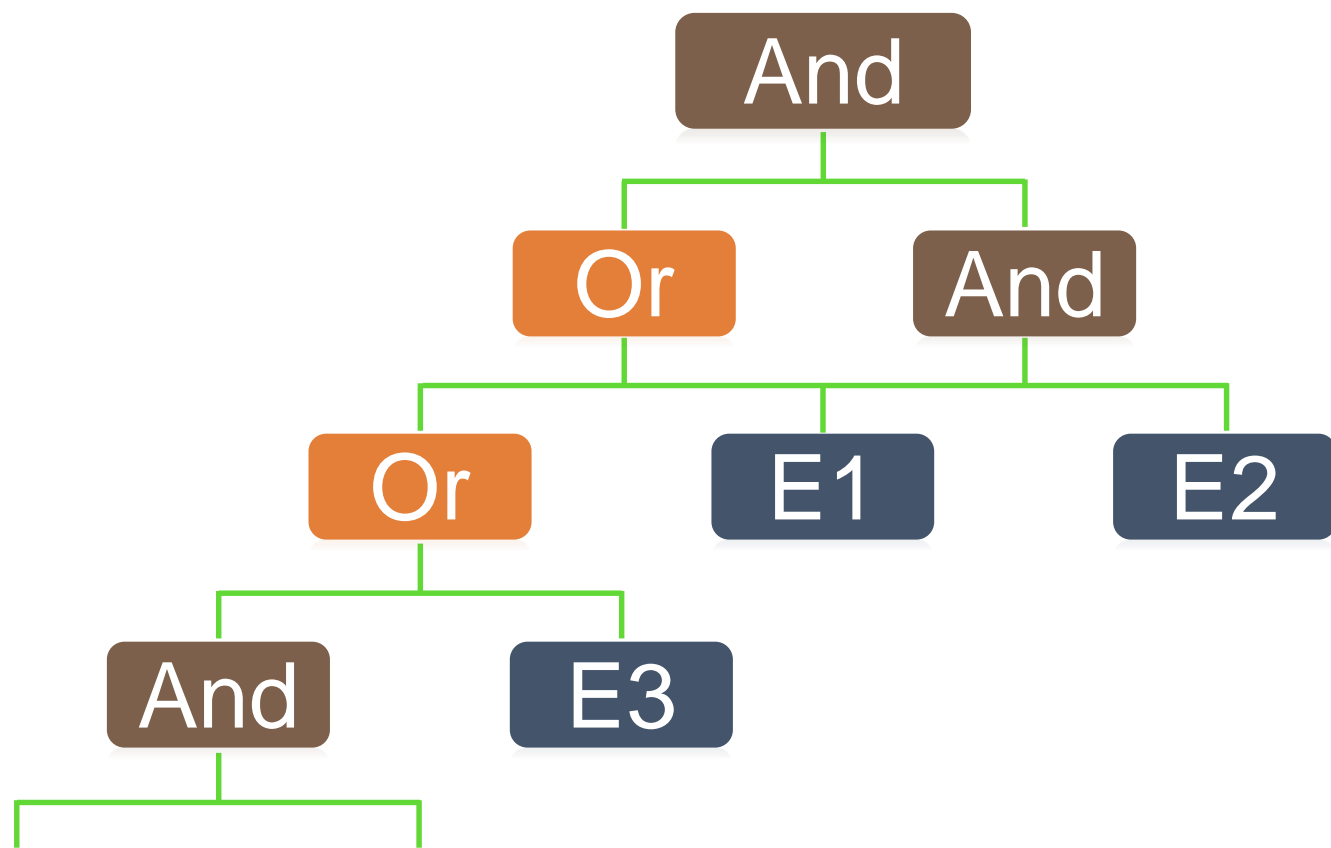
# No Country for Old Men, (2007)



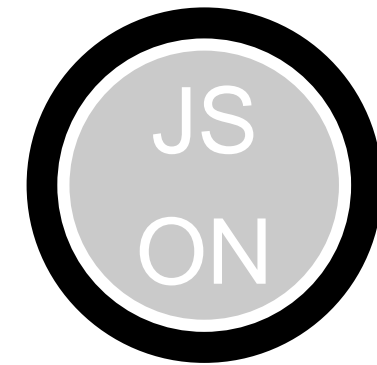




# JSON Export



=



Thank you