

The background is a vibrant, abstract composition of colorful smoke and light trails. On the left, there are dense, billowing clouds of purple and magenta smoke. On the right, there are similar clouds in shades of pink, red, and orange. The top and bottom edges feature bright, ethereal light trails in shades of cyan and blue, resembling fiber optic lights or star trails. The overall effect is a dynamic and visually rich dark theme aesthetic.

INTO THE DARK MODE

Uma visão compreensiva
do Dark Theme para
Android e iOS



C . E . S . A . R




Antonio Silva

Engenheiro de Software
Associate Android Developer

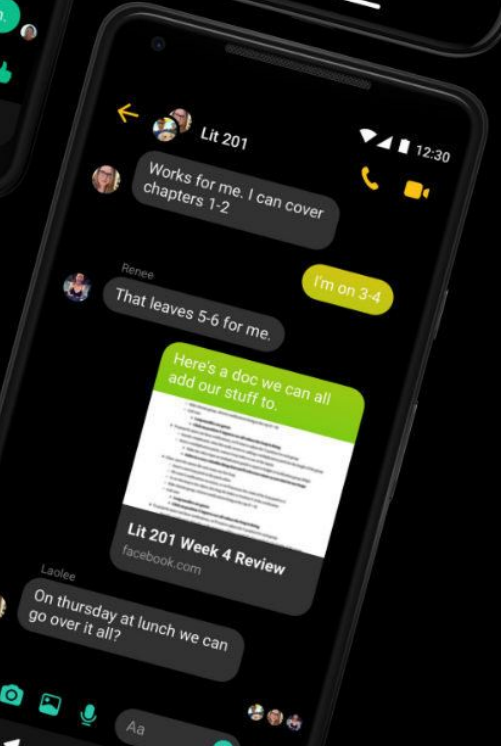


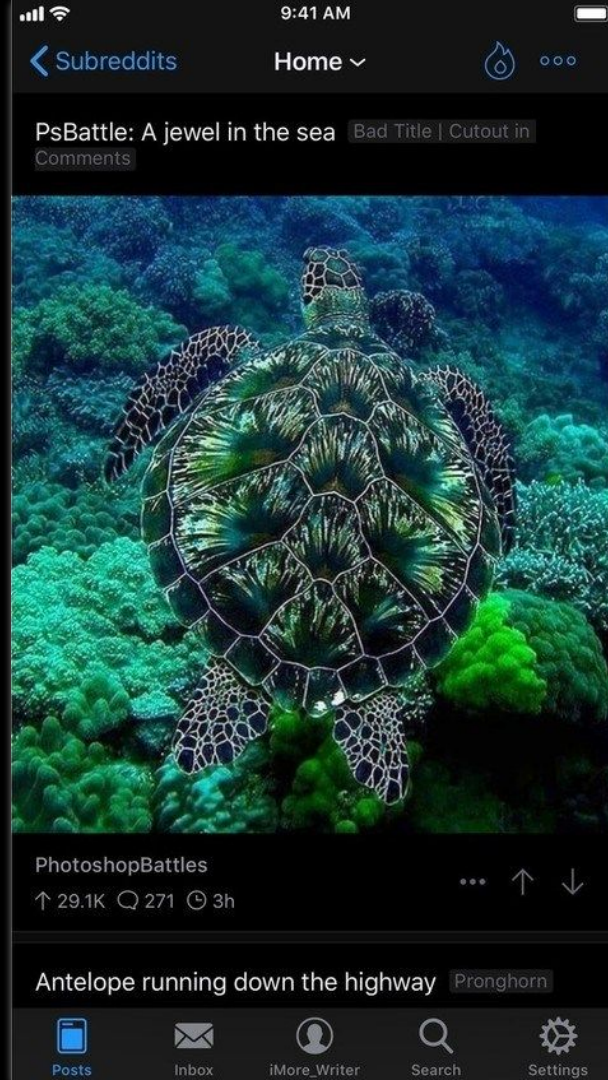
João Camelo

Engenheiro de Software
Graduando de Sistemas de Informação



O que é o
Dark Mode?





1:59



cnet

Five cool uses for the wonder material graphene

7.1K views



281



7



Share



Download



Add to



CNET

1.6M subscribers



SUBSCRIBED



Up next

Autoplay



2:17

One of the strongest lightweight mate...

Massachusetts Instit...
1.3M views



Make The Most of Your AirPods!

Make the Most of Your AirPods!
(How to Use Air

Clear Filters Done

Instant Book

Trip Type

For Families
Explore entire homes with 5-star reviews from families and essentials like a kitchen and TV

For Work
Explore top-rated homes with essentials like a workspace, wifi, and self check-in

Price Range

\$150 \$800

Rating

Amenities

9:41

Back

Sky Castle
★★★★ 908 reviews \$70/night

Check-in 21 Mar Checkout 26 Mar

Booking Details

Capi's Chicken Capi's Chicken
7941 St.Muskegon 35 Manchester

Hotels See All

Capi's Chicken Capi's Chicken
80 San Pablo 411 Fremont

Explore Saved My Booking Inbox Profile

9:41

Back

Lord of the Fries
Chicken & Potatoes · 230m · Opening
★★★★ (320) on Yelp

Call Route Website

About

Fee & Tax Details

9:41

Back

Destinations
★ 5.0 Good 2.5 km \$98.00

Rome, a settlement around a ford on the Tiber in central Italy conventionally founded in 753 BC, was ruled for a period of 244 years by a monarchical... more

More About Italy

1


9:41

Back

Flights TK-272 Date 11 Jul Time 8:40 AM

Flights Details

Name	Jenni Phan
Class	Economy
Seat	7D
Gate	A2
Boarding	8:30 AM



9:41

Back

Nicola Donovan

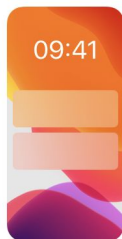
Hi Nicola, Can i ask you some question for my next trip? ^^

Hi Msmof! It's my pleasure. What do you want to know about my home?

Hi Nicola, Can i ask you some question for my next trip? ^^

Settings Display & Brightness

APPEARANCE



Light



Dark



Automatic



BRIGHTNESS



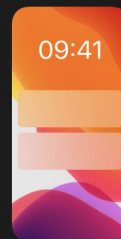
True Tone



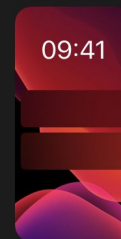
Automatically adapt iPhone display based on ambient lighting conditions to make colors appear consistent in different environments.

Settings Display & Brightness

APPEARANCE



Light



Dark



Automatic



BRIGHTNESS



True Tone



Automatically adapt iPhone display based on ambient lighting conditions to make colors appear consistent in different environments.

Brightness level
85%

Night Light
Off / Will never turn on automatically

Adaptive brightness
On

Wallpaper

Theme
Light

Sleep
After 30 minutes of inactivity

Auto-rotate screen

Brightness level
85%

Night Light
Off / Will never turn on automatically

Adaptive brightness
On

Wallpaper

Theme
Dark

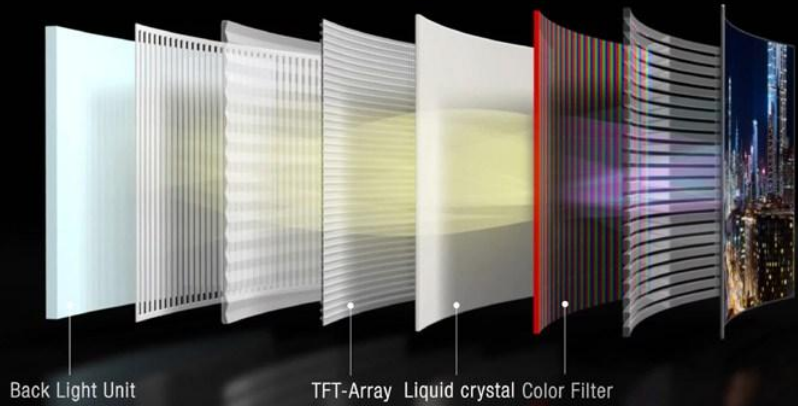
Sleep
After 30 minutes of inactivity

Auto-rotate screen



Por que usar?





Back Light Unit

TFT-Array

Liquid crystal

Color Filter

LED

Backlight



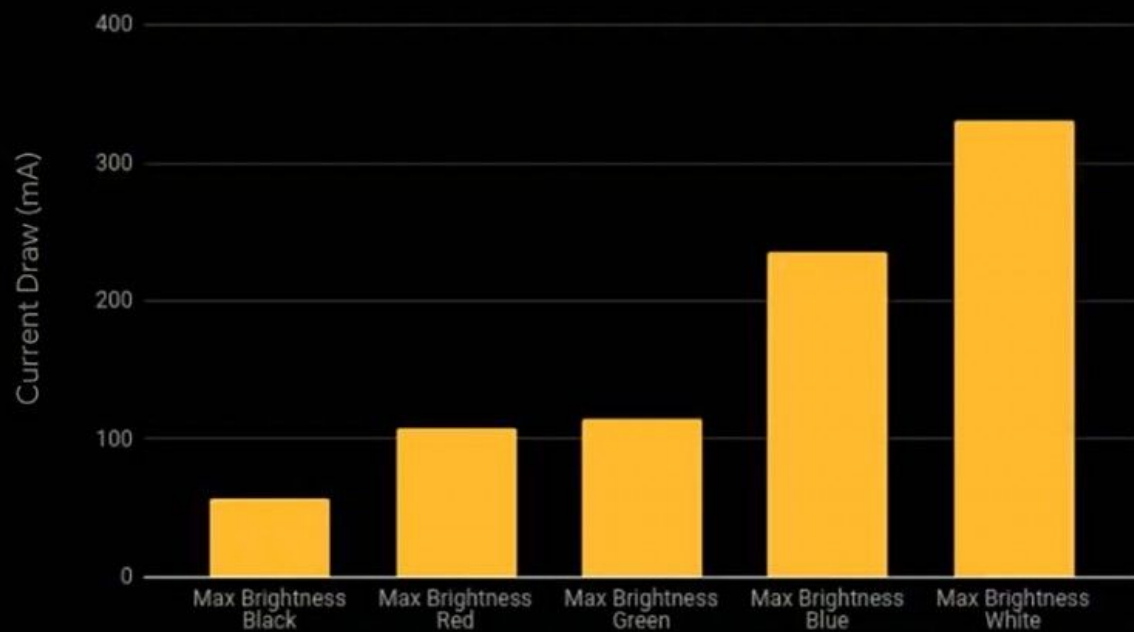
Glass + TFT + OLED

OLED

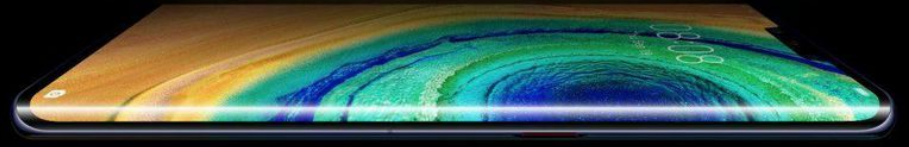
**Pixel com
luz própria**

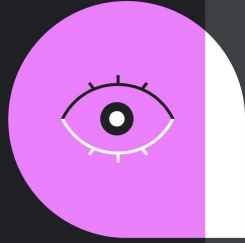
Power

2016 Pixel Max Brightness



iPhone XS
Samsung Galaxy S9+
HUAWEI Mate 20 Pro
Google Pixel 3
iPhone 11 Pro
Xiaomi Mi 9
One Plus 7 Pro
HUAWEI Mate 30 Pro





Contraste dá legibilidade

Cores diferentes passam
sentimentos diferentes

Sua falta faz falta



WCAG 2.1

AA

Compliant

EQUALWEB

DIGITAL ACCESSIBILITY

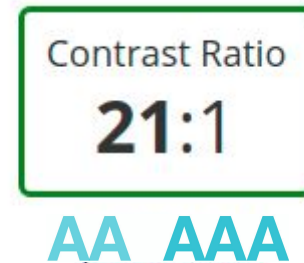
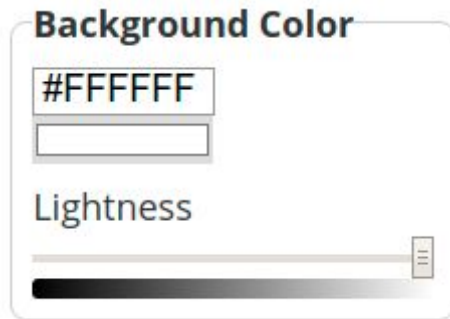
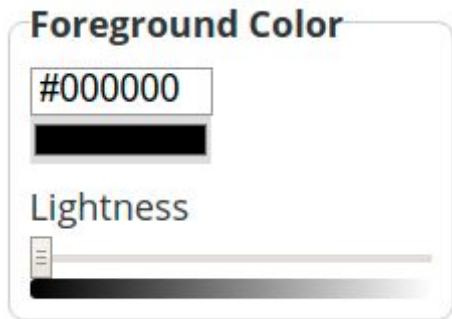
AA

7:1

AAA

15.8:1

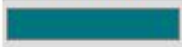
Contraste dá legibilidade



Sua falta faz falta

Foreground Color

#007580

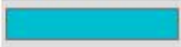


Lightness



Background Color

#00BED1



Lightness



Contrast Ratio


2.4:1

AA AAA


Cores diferentes passam sentimentos diferentes

Foreground Color

#002051




Lightness




Background Color

#00BED1



Lightness



Contrast Ratio


7:1

AA AAA


Cores diferentes passam sentimentos diferentes

Foreground Color

#000000




Lightness




Background Color

#C7E3FB



Lightness



Contrast Ratio

15.8:1

AA AAA

Cores diferentes passam sentimentos diferentes

Foreground Color

#FFFFFF



Lightness



Background Color

#182334



Lightness



Contrast Ratio

15.8:1

AA AAA



Design com preto

Luxo

Prestígio

Elegância



Podem criar uma sensação de mistério
e manter a atenção do usuário,
reduzindo distrações





Guidelines

Android Design Guidelines



Intuitivo - Consistente - Responsivo

Human Interface Guidelines



Clareza - Beleza - Profundidade

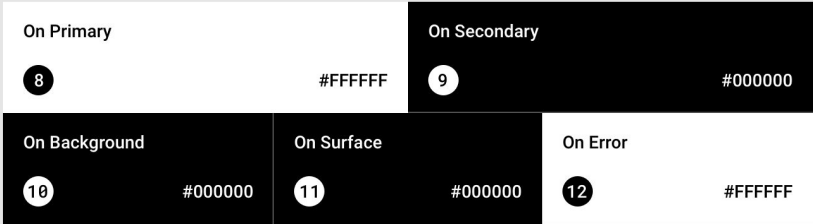
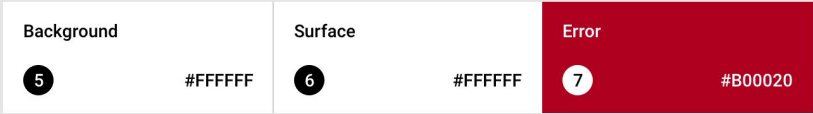
Como seguir?



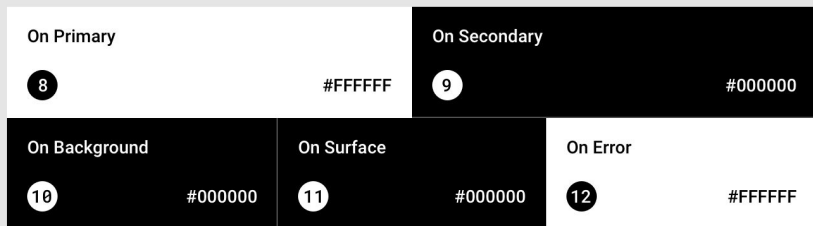
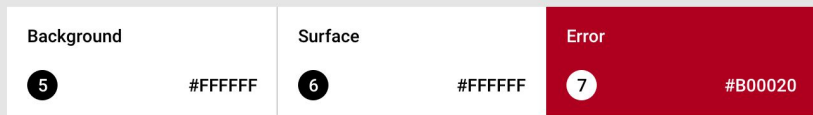
The background is a vibrant, abstract composition of colors. On the left, there are swirling, ethereal shapes in shades of purple and magenta. In the center, there's a bright, glowing blue and cyan area with a textured, almost crystalline appearance. On the right, there are soft, flowing shapes in shades of pink, red, and yellow, resembling ink or paint splatters. The overall effect is dynamic and colorful. A dark grey, semi-transparent rectangular box is centered over the image, containing the text.

**Escolhendo as
cores certas**

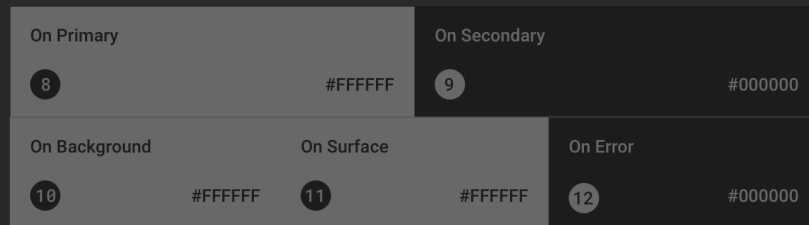
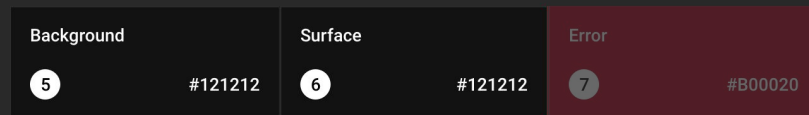
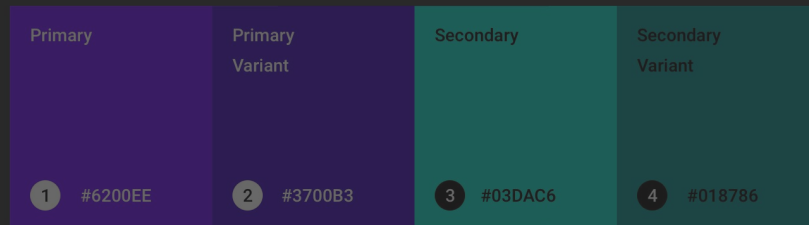
Baseline palette



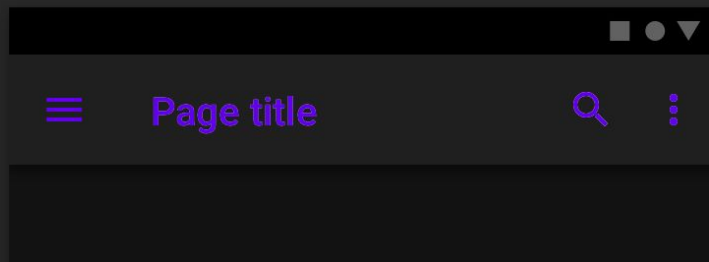
Baseline palette



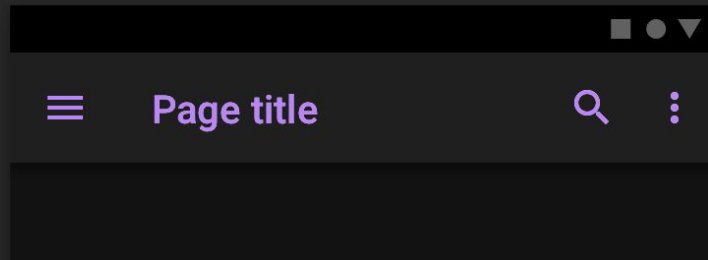
Dark Theme Baseline Palette?



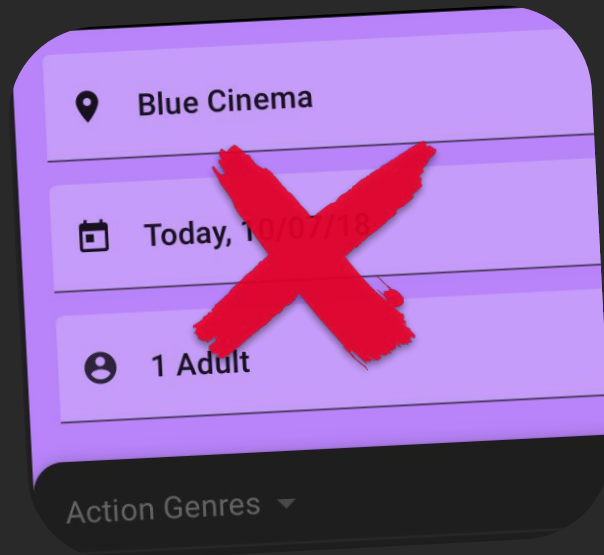
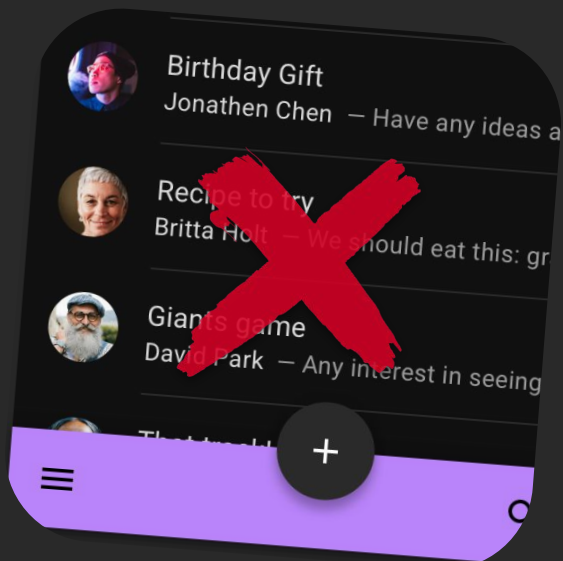
Paleta de cores do Material Design



Paleta de cores do Material Design



Não é Dark Mode se não for escuro



Dark Theme Baseline Palette



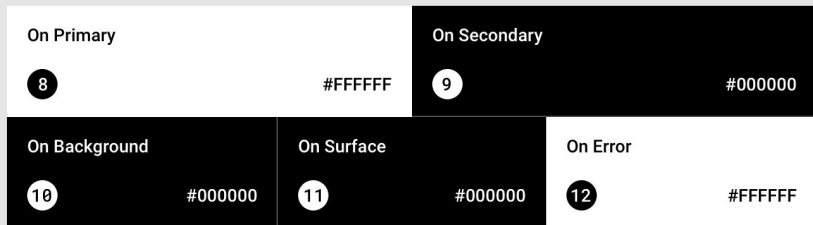
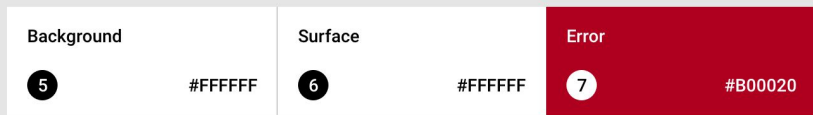
Contrast Ratio
2.64:1



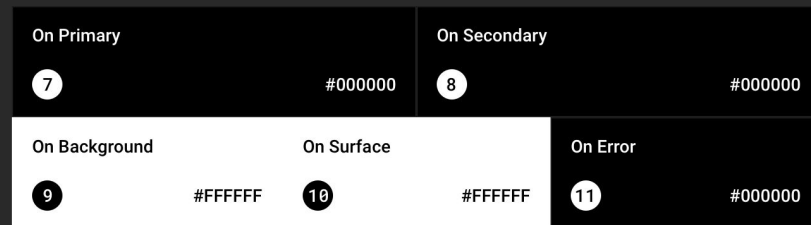
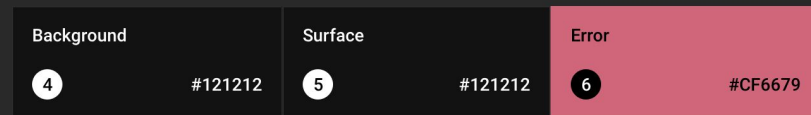
Contrast Ratio
7.92:1

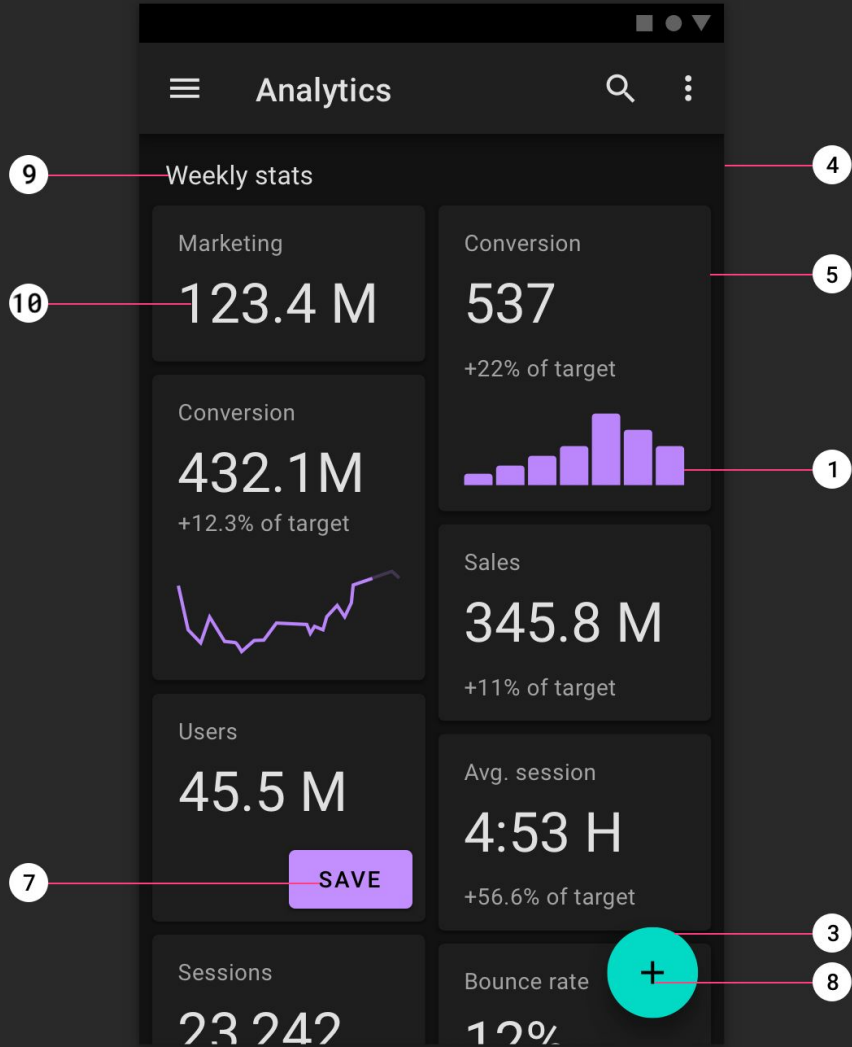
Primary 200 #BB86FC 1	Primary Variant 700 #3700B3 2	Secondary 200 #03DAC6 3
Background 4 #121212	Surface 5 #121212	Error 6 #CF6679
On Primary 7 #000000		On Secondary 8 #000000
On Background 9 #FFFFFF	On Surface 10 #FFFFFF	On Error 11 #000000

Baseline palette

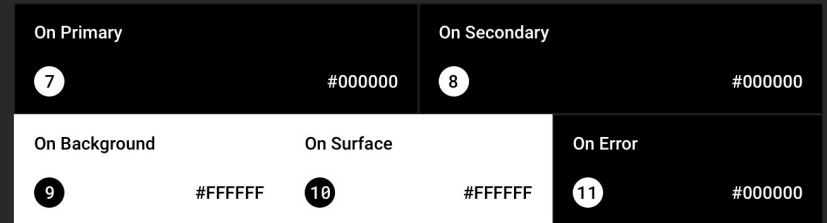
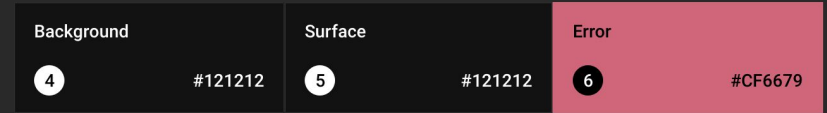
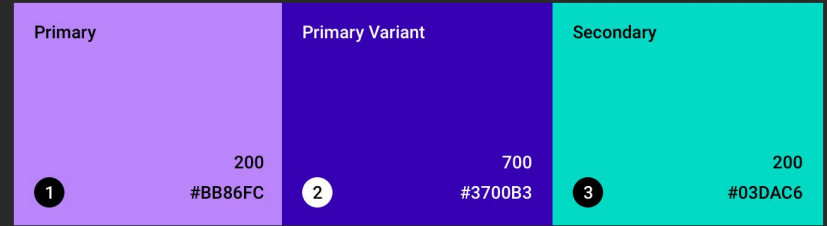


Dark Theme Baseline Palette

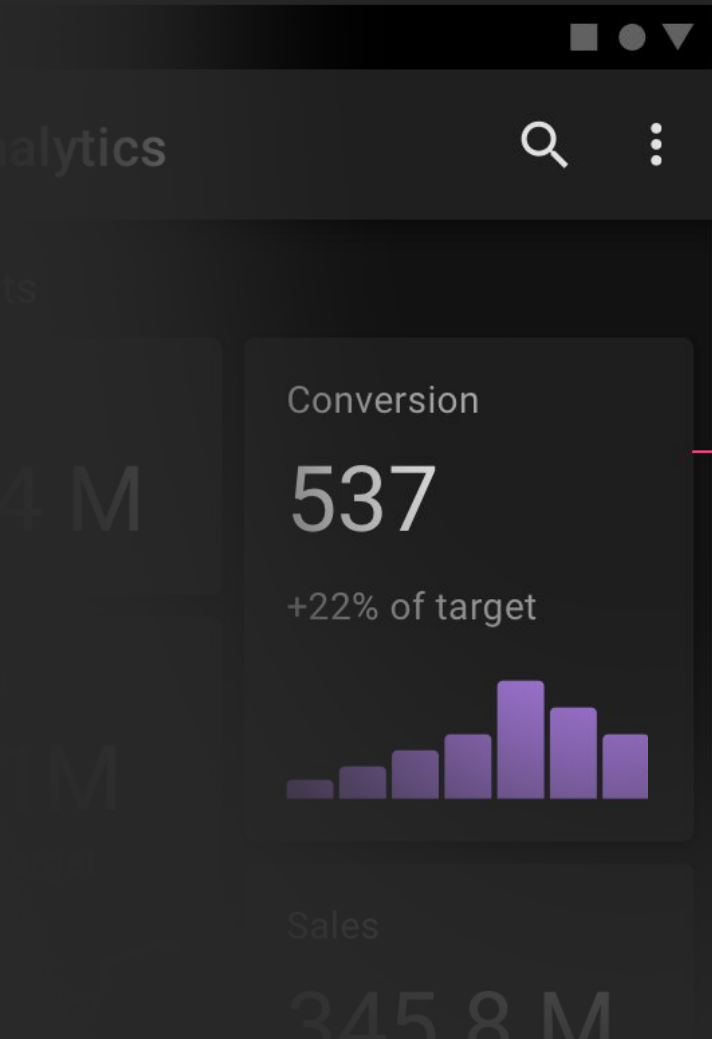




Dark Theme Baseline Palette



Dark Theme Baseline Palette



4

5

Primary 200 #BB86FC	Primary Variant 700 #3700B3	Secondary 200 #03DAC6
---------------------------	-----------------------------------	-----------------------------

Background 4 #121212	Surface 5 #121212	Error 6 #CF6679
----------------------------	-------------------------	-----------------------

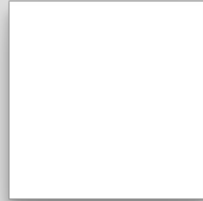
On Primary 7 #000000	On Secondary 8 #000000	
On Background 9 #FFFFFF	On Surface 10 #FFFFFF	On Error 11 #000000



Elevação

Android

Sombras para demonstrar elevação

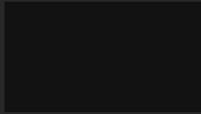


Sombras para demonstrar elevação?

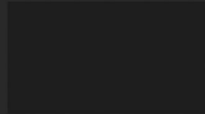


Luz para demonstrar elevação!

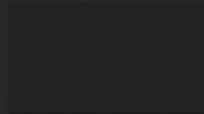
00 DP



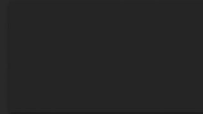
01 DP



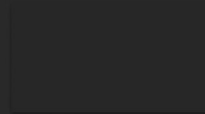
02 DP



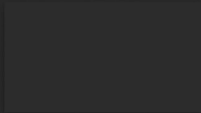
03 DP



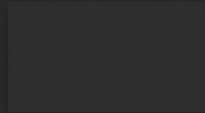
04 DP



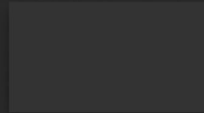
06 DP



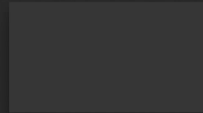
08 DP



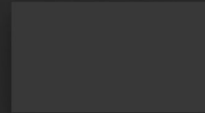
12 DP

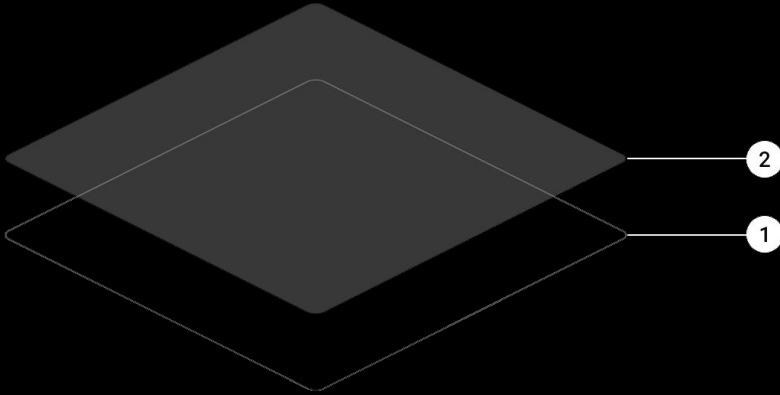


16 DP



24 DP





00dp Overlay: 0%	01dp Overlay: 5%
02dp Overlay: 7%	03dp Overlay: 8%
04dp Overlay: 9%	06dp Overlay: 11%
08dp Overlay: 12%	12dp Overlay: 14%
16dp Overlay: 15%	24dp Overlay: 16%



Analytics



Weekly stats

Marketing

123.4 M

Conversion

537

+22% of target



Conversion

432.1M

+12.3% of target



Sales

345.8 M

+11% of target

Users

45.5 M

SAVE

Avg. session

4:53 H

+56.6% of target

Sessions

23 242

Bounce rate

100%



00dp

Overlay: 0%

01dp

Overlay: 5%

02dp

Overlay: 7%

03dp

Overlay: 8%

04dp

Overlay: 9%

06dp

Overlay: 11%

08dp

Overlay: 12%

12dp

Overlay: 14%

16dp

Overlay: 15%

24dp

Overlay: 16%

+11% of target

Avg. session

4:53 H

+56.6% of target

Bounce rate

12%



Secondary

200

#03DAC6

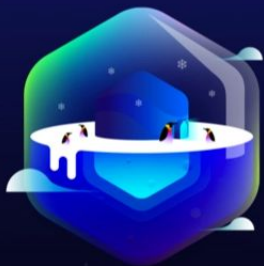
3



**Como manter
sua identidade?**



Skip



Explore the World

From Andorra to Antarctica.
We leave no land uncovered.



Aurora Borealis

The lights come at night when the sky is dark.
Like a celestial ballet of light dancing across
the night sky.

Featured Destinations

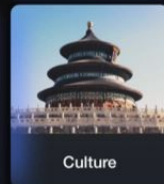
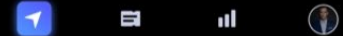
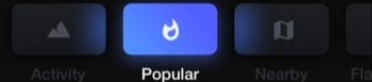


Explore



Aurora Borealis

The aurora borealis, offer an entrancing,
dramatic, magical display that amazes...



Save



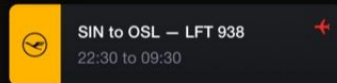
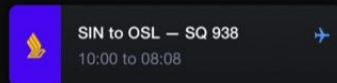
History

Recent

Singapore to Oslo

Feb 19 - 28

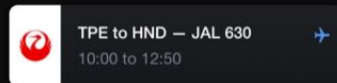
Round Trip



Taiwan to Japan

Jan 10

One Way



Beach



63 Results for 'Beach'

Best Deals

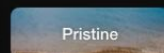
See all



Water Villas
Maldives



Playa del Pe
Spain



Top Picks

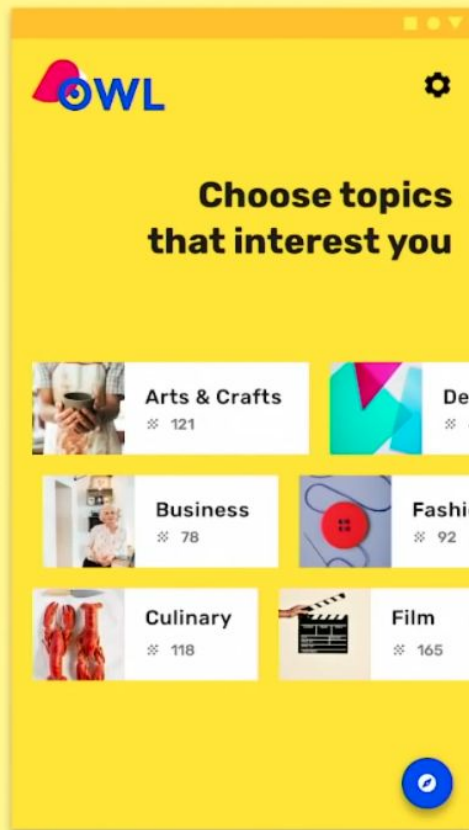
Filter



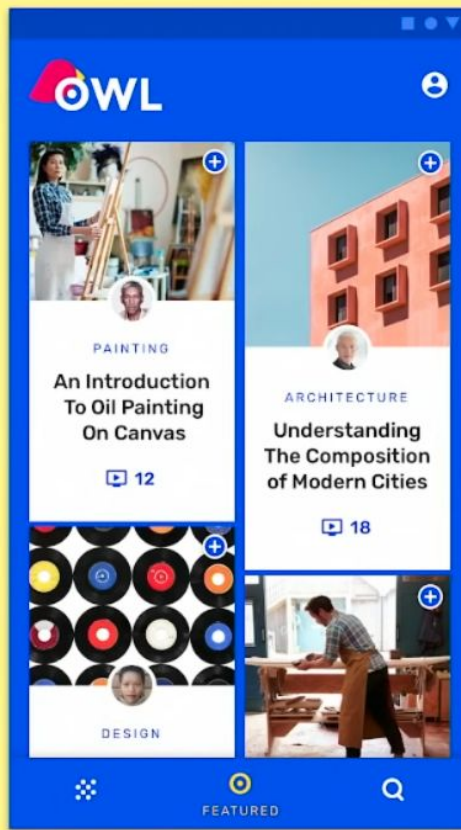
Featured Destinations



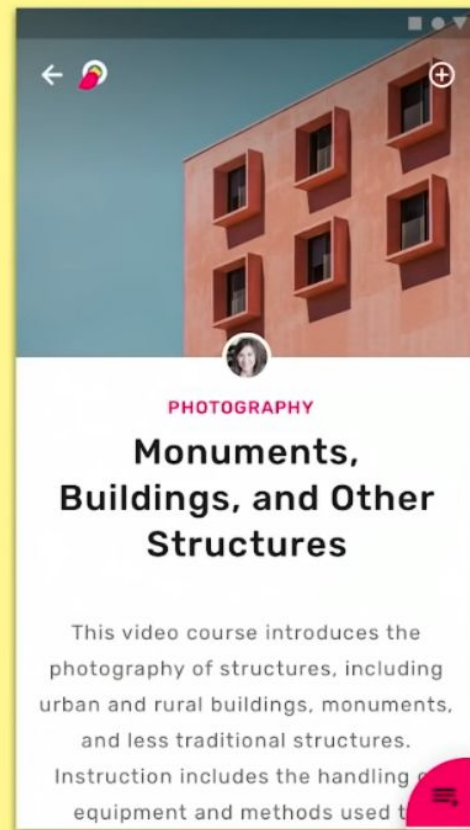
Personalize



Browse



Learn

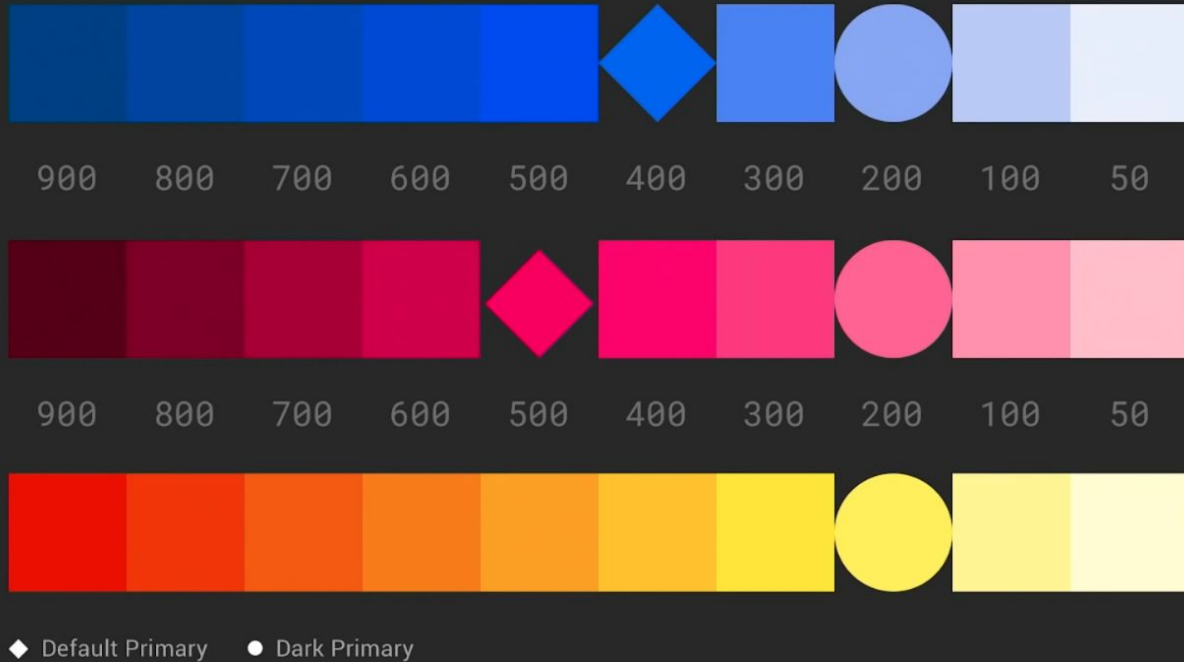


PHOTOGRAPHY

Monuments, Buildings, and Other Structures

This video course introduces the photography of structures, including urban and rural buildings, monuments, and less traditional structures. Instruction includes the handling of equipment and methods used to

Paleta de cores do Material Design

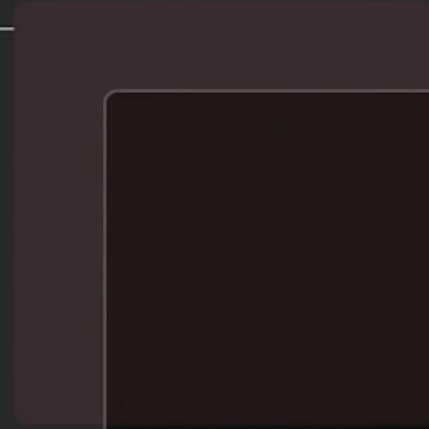


Primary
8% transparency

Surface

Overlay novamente

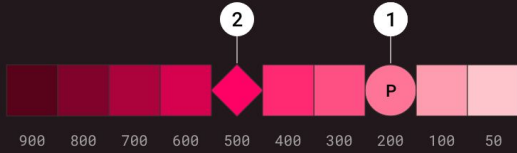
8% Primary



#24191C

#121212

Tom sutil mantendo contraste



PHOTOGRAPHY

Monuments, Buildings, and Other Structures

This video course introduces the photography of structures, including urban and rural buildings, monuments, and less traditional structures. Instruction includes the handling of equipment and methods used to

1

2



Monuments, Buildings, and Other Structures

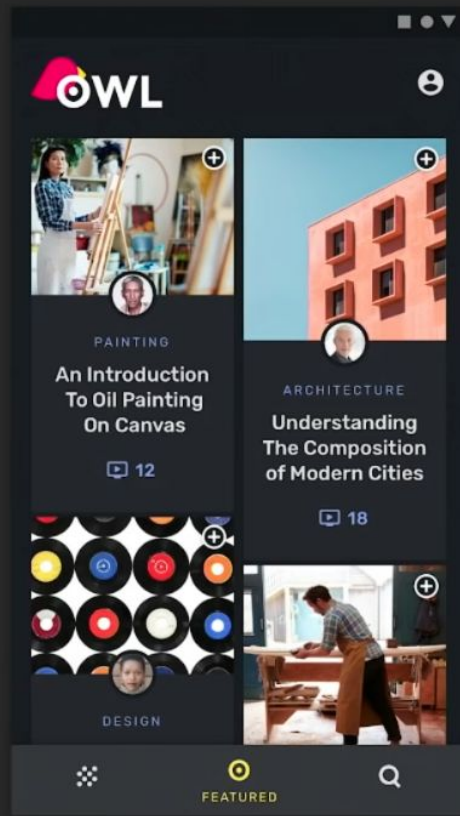
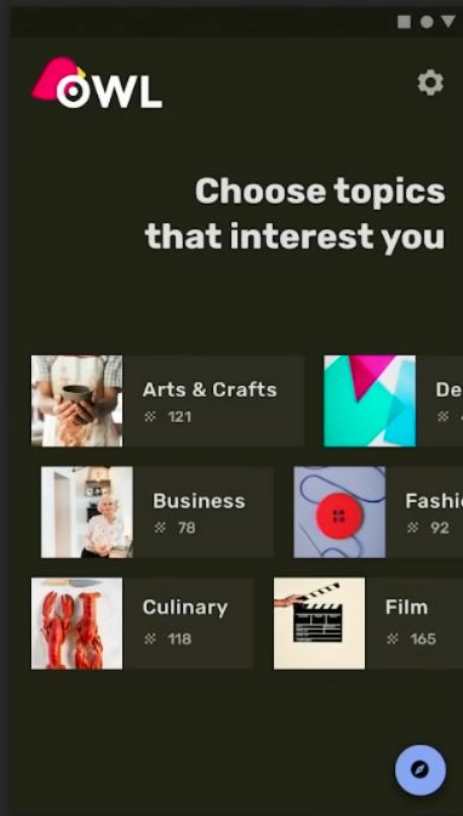
This video course introduces the photography of structures, including urban and rural buildings, monuments, and less traditional structures. Instruction includes the handling of equipment and methods used to

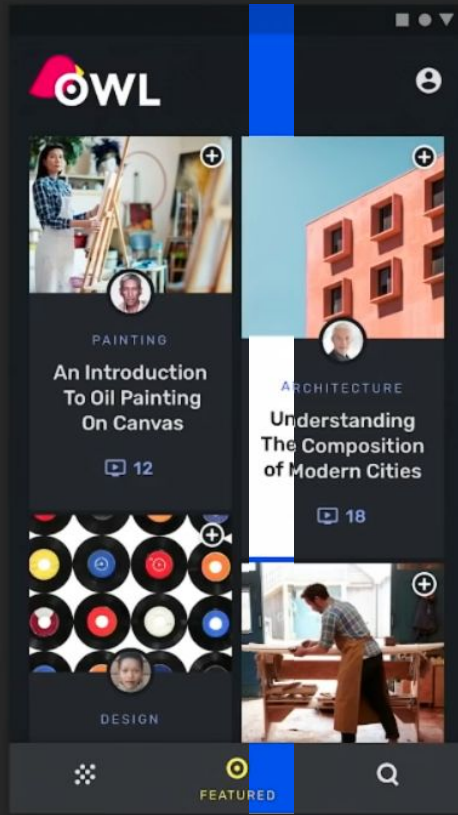
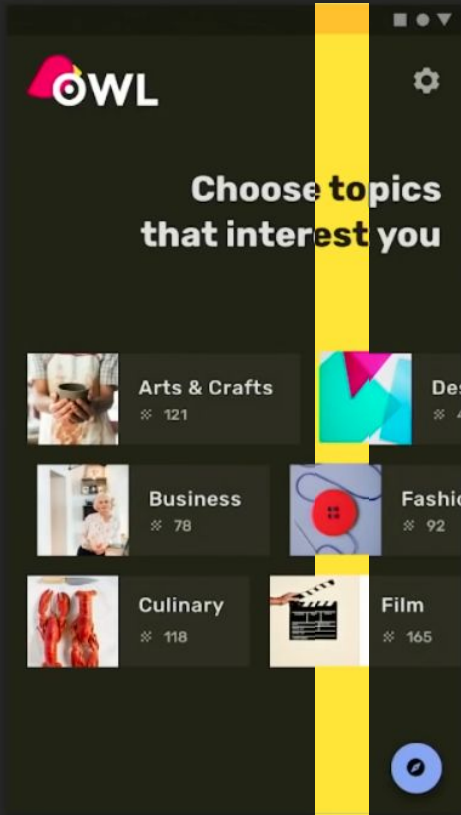


Primary Variant

500

#FF0266





The background is a vibrant, abstract composition of ink-like splatters and smoke. On the left, there are dense, swirling clouds of purple and magenta. In the center, there are vertical streaks and splatters of bright cyan and light blue. On the right, there are large, billowing clouds of pink and red, with some yellow and orange accents. The overall effect is dynamic and colorful, resembling a microscopic view of ink in water or a stylized, ethereal landscape.

Imagens



Today

Skip Review Skip

Yesterday

+ Start a new share

Sunday, Jan 7
Sophie, Rebecca

Morocco

Photos Albums Assistant Sharing

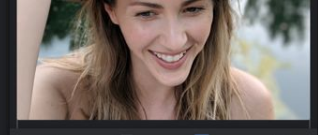
Google Photos

Yesterday Santa Clarita

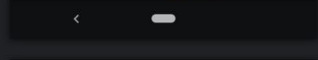
Photos Albums Assistant Sharing

Search your photos

Mismaloya



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Search "hiking"

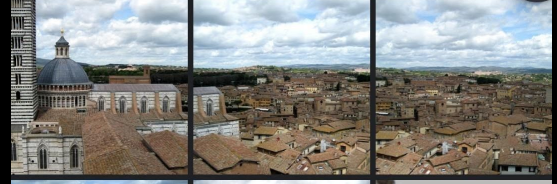
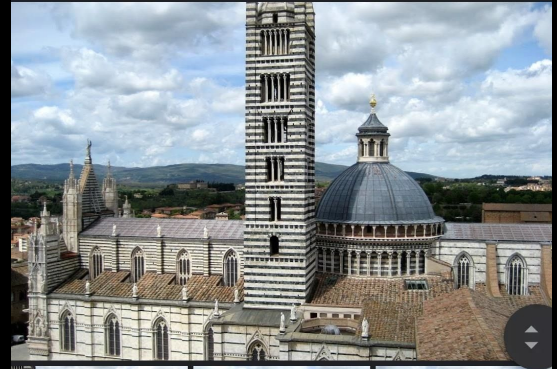
Favorites People Places

ALBUMS

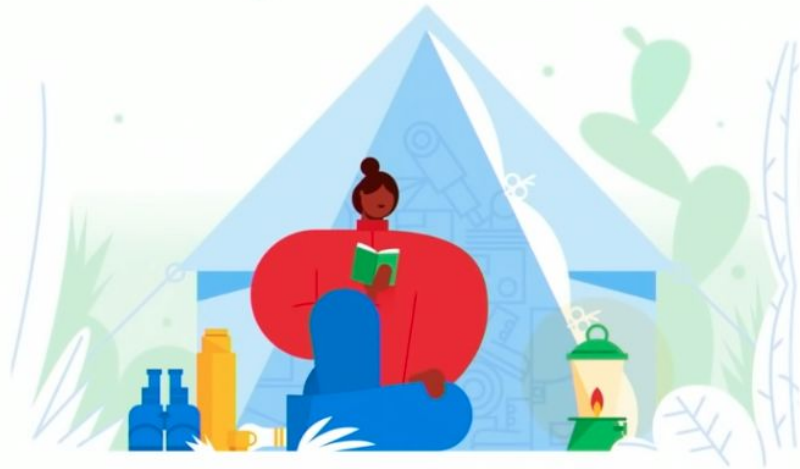
2:54

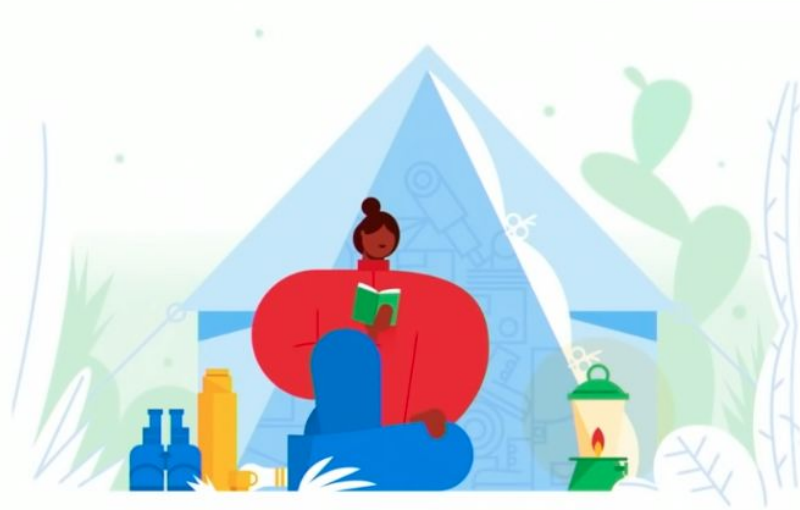
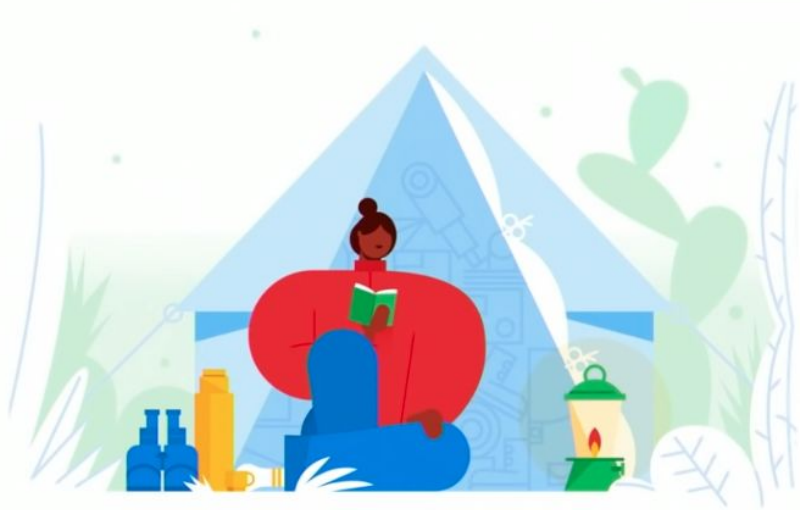
Search "Fiesole"

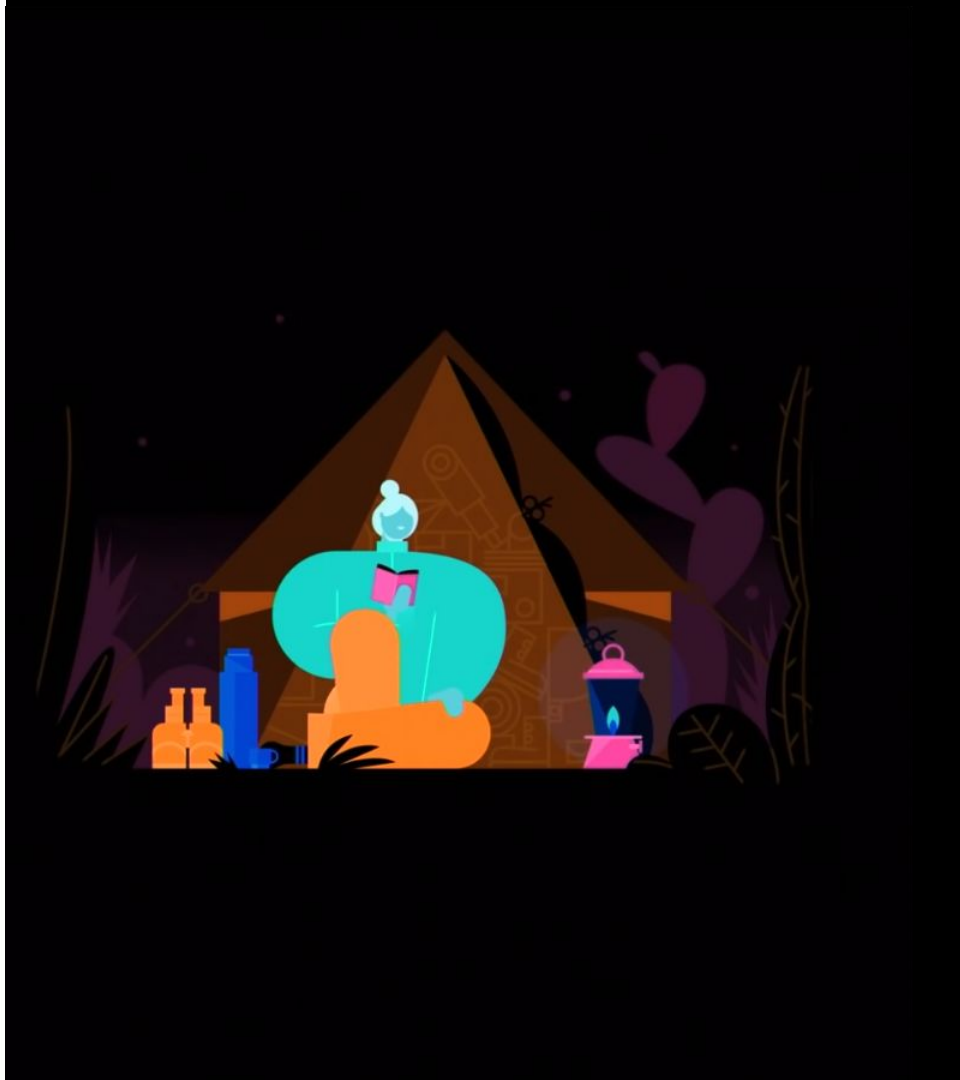
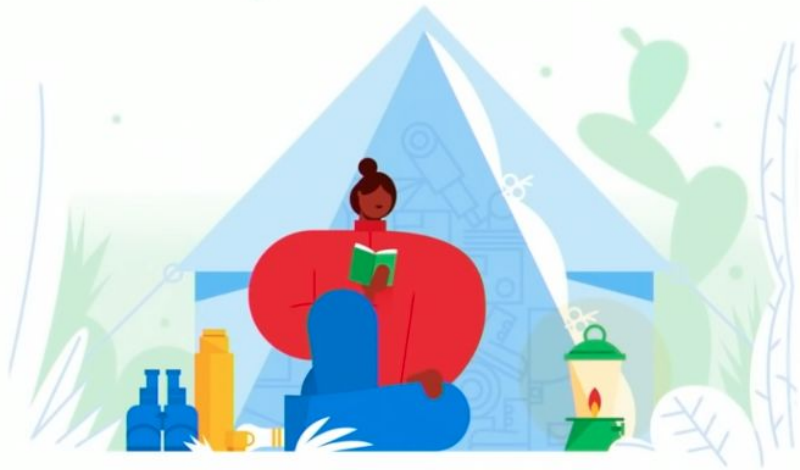
Sun, Apr 22, 2012 Florence

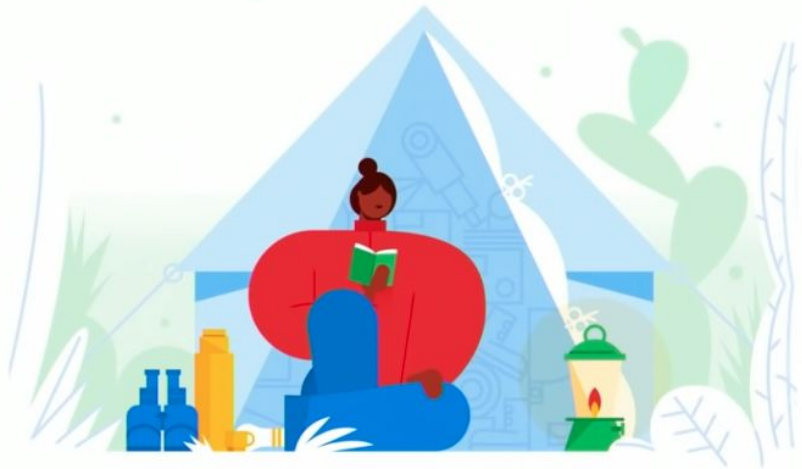


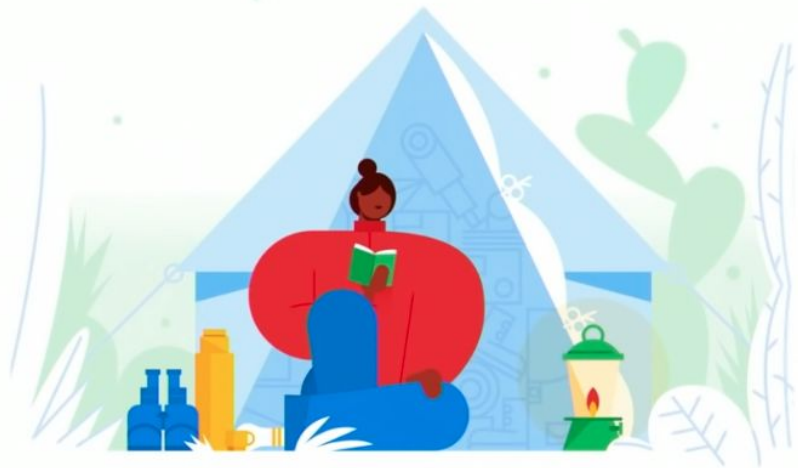
Photos Albums Assistant Sharing











900

800

700

600

500

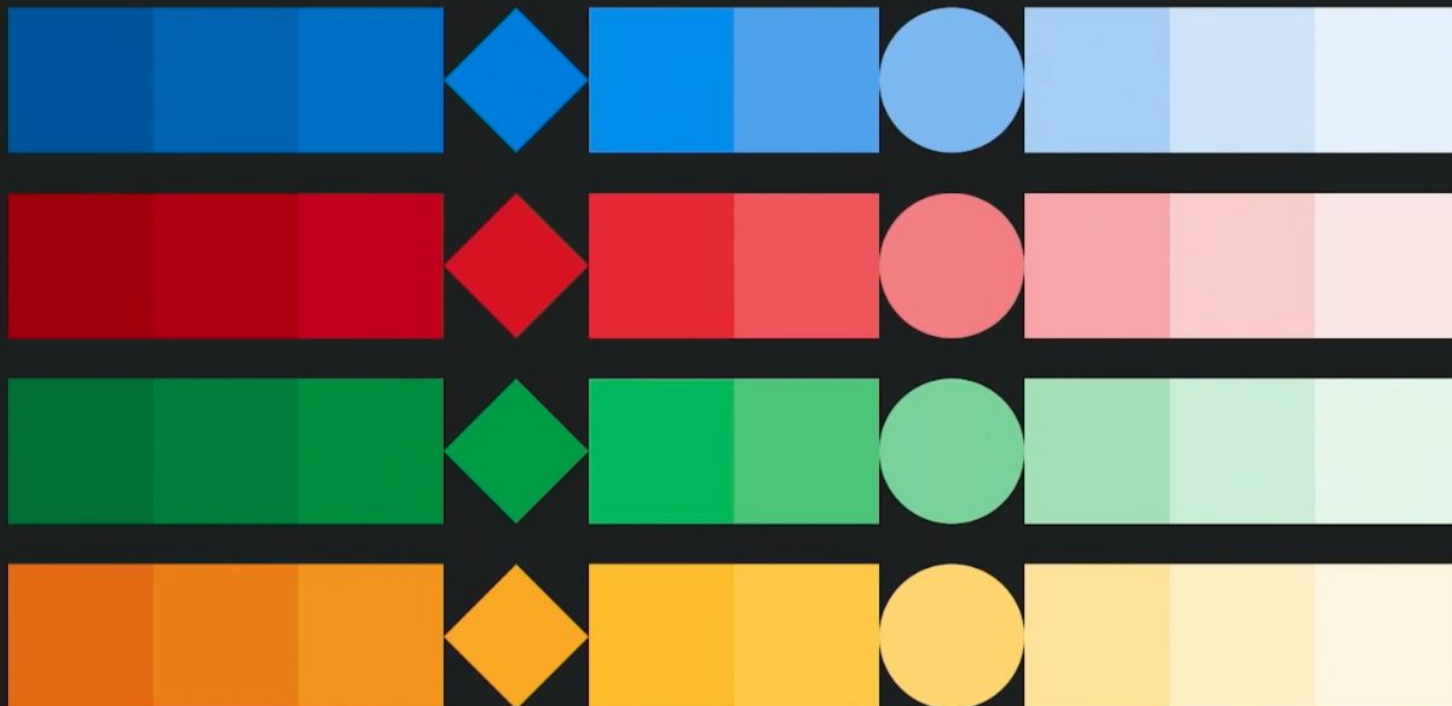
400

300

200

100

50



◆ Default Primary ● Dark Primary

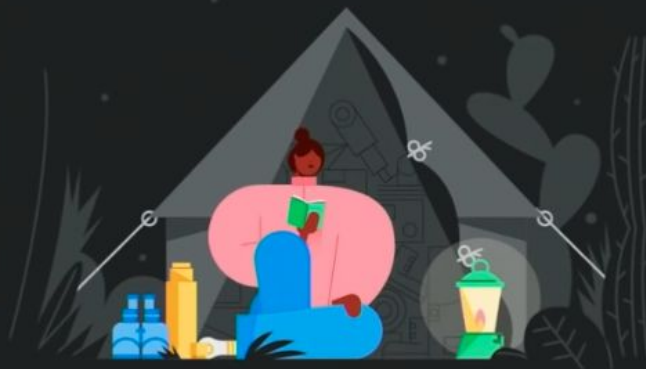


☰ Search in Drive



Quick Access

Workspaces



Create your own personal
workspace

The background features a dynamic, abstract composition of ink splashes and smoke-like patterns. On the left, there are dense, swirling clouds of vibrant purple and magenta. In the center, a large, bright cyan or light blue splash dominates, with fine, vertical streaks of the same color extending downwards. On the right, there are softer, more ethereal splashes of pink and light red, with some yellowish-gold highlights. The overall effect is one of movement and vibrant color against a dark, almost black background.

Implementação



Como adotar o Dark Mode no iOS

Cores que se adaptem no iOS



System Colors se adaptam ao Dark Mode

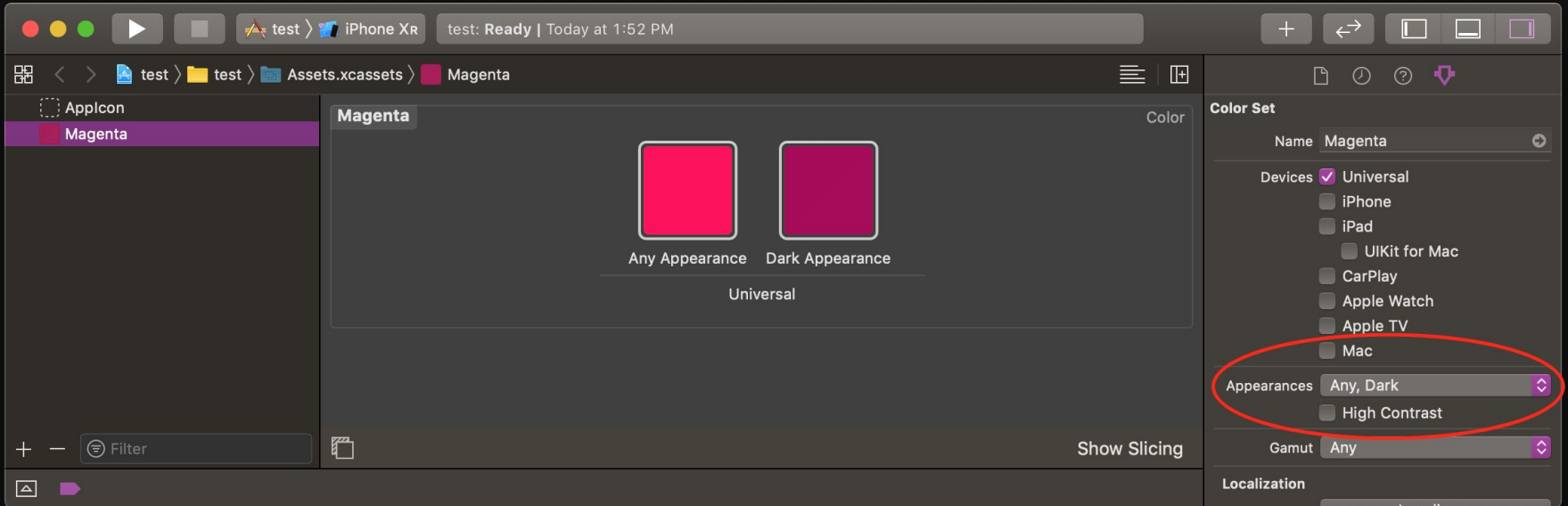


```
// Antes do iOS 13
label.color = UIColor.blue

// Depois do iOS 13
label.color = UIColor.systemBlue
```

Light	Dark	Name	API
R 0 G 122 B 255	R 10 G 132 B 255	Blue	systemBlue
R 142 G 142 B 147	R 152 G 152 B 157	Gray	systemGray
R 52 G 199 B 89	R 48 G 209 B 88	Green	systemGreen
R 88 G 86 B 214	R 94 G 92 B 230	Indigo	systemIndigo
R 255 G 149 B 0	R 255 G 159 B 10	Orange	systemOrange
R 255 G 45 B 85	R 255 G 55 B 95	Pink	systemPink
R 175 G 82 B 222	R 191 G 90 B 242	Purple	systemPurple
R 255 G 59 B 48	R 255 G 69 B 58	Red	systemRed
R 90 G 200 B 250	R 100 G 210 B 255	Teal	systemTeal
R 255 G 204 B 0	R 255 G 214 B 10	Yellow	systemYellow

Custom Colors



Custom Images

The screenshot displays the Xcode interface for managing an Asset Catalog. The main canvas shows the 'LightAndDarkHeaderImage' set with two appearances: 'Any Appearance' (represented by a beach scene) and 'Dark Appearance' (represented by a sunset scene). The 'Dark Appearance' is currently selected. The right-hand panel, titled 'Image Set', contains various configuration options. The 'Appearances' dropdown is highlighted with a red circle and set to 'Any, Dark'. Other settings include 'Name' (LightAndDarkHeaderImage), 'Render As' (Default), 'Compression' (Inherited (Automatic)), 'Resizing' (Preserve Vector Data), 'Devices' (Universal, iPhone, iPad, etc.), 'Scales' (Single Scale), 'Gamut' (Any), and 'Direction' (Fixed).

LightAndDarkHeaderImage Image

Any Appearance

Dark Appearance

Universal

Image Set

Name LightAndDarkHeaderImage

Render As Default

Compression Inherited (Automatic)

Resizing Preserve Vector Data

Devices Universal

iPhone

iPad

UIKit for Mac

CarPlay

Apple Watch

Apple TV

Mac

Appearances Any, Dark

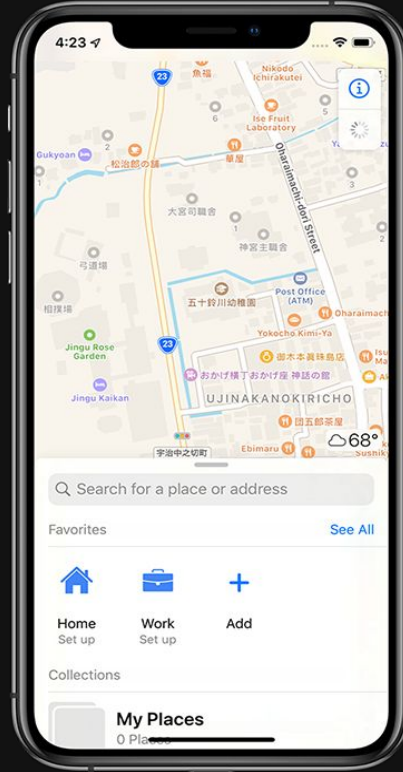
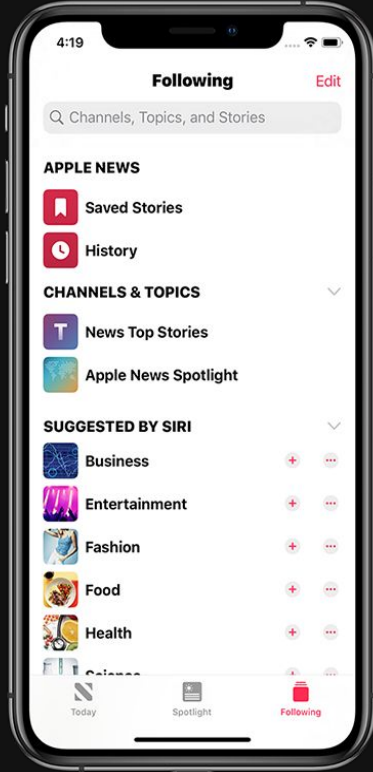
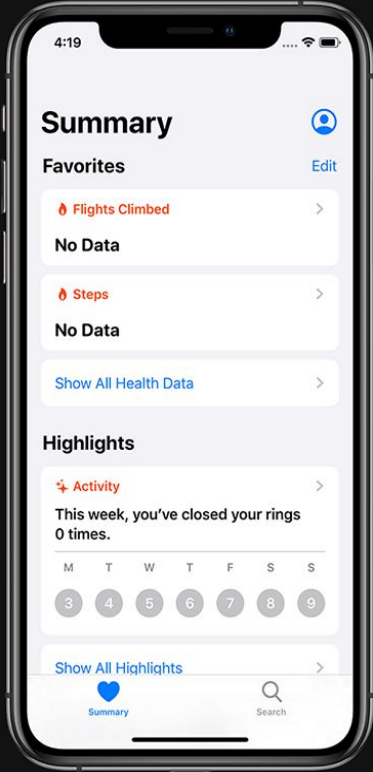
High Contrast

Scales Single Scale

Gamut Any

Direction Fixed

SF Symbols



Atributos de Texto



Dynamic System Colors



```
// Label
```

```
// SecondaryLabel
```

```
label.color = UIColor.secondaryLabel
```

Color	Used for	API
Label	A text label that contains primary content.	label
Secondary label	A text label that contains secondary content.	secondaryLabel
Tertiary label	A text label that contains tertiary content.	tertiaryLabel
Quaternary label	A text label that contains quaternary content.	quaternaryLabel
Placeholder text	Placeholder text in controls or text views.	placeholderText
Separator	A separator that allows some underlying content to be visible.	separator
Opaque separator	A separator that doesn't allow any underlying content to be visible.	opaqueSeparator
Link	Text that functions as a link.	link

Texto sem Dynamic System Colors



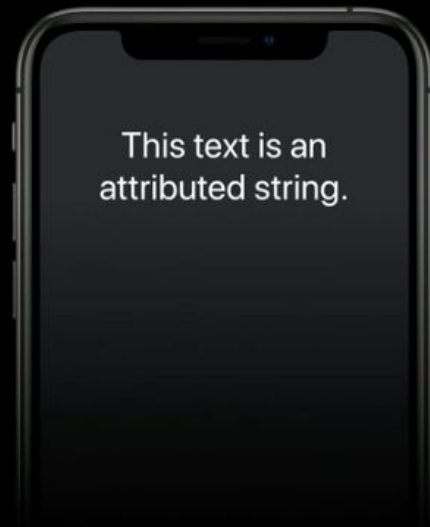
```
let attributes: [NSAttributedString.Key: Any] = [  
    .font: UIFont.systemFont(ofSize: 36.0)  
]
```



Textos com Dynamic System Colors



```
let attributes: [NSAttributedString.Key: Any] = [  
    .font: UIFont.systemFont(ofSize: 36.0)  
    .foregroundColor: UIColor.label  
]
```



Identificando Dynamic Custom Colors



```
let dynamicColor = UIColor { (traitCollection: UITraitCollection) -> UIColor in
    if traitCollection.userInterfaceStyle == .dark {
        return .black
    } else {
        return .white
    }
}
```

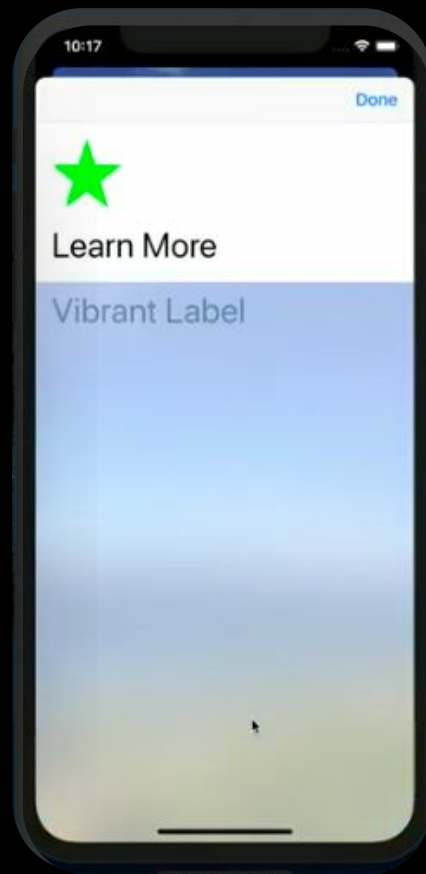
UI Effects



```
// Visual effect view blurring the background image
let blurEffect = UIBlurEffect(style: .light)
let blurView = configureBlurView(effect: blurEffect)
view.addSubview(blurView)

// Visual effect view for vibrancy
let vibrancyEffect = UIVibrancyEffect(blurEffect: blurEffect)
let vibrancyView = configureVibrancyView(effect: vibrancyEffect)
blurView.contentView.addSubview(vibrancyView)

// ... //
```



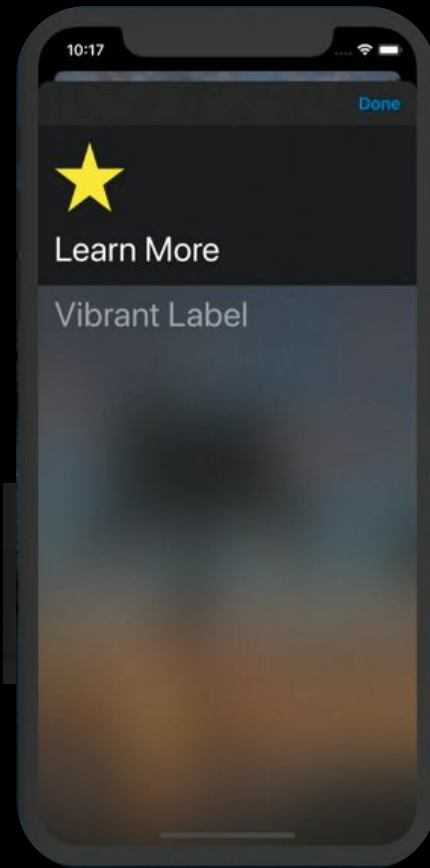
UI Effects

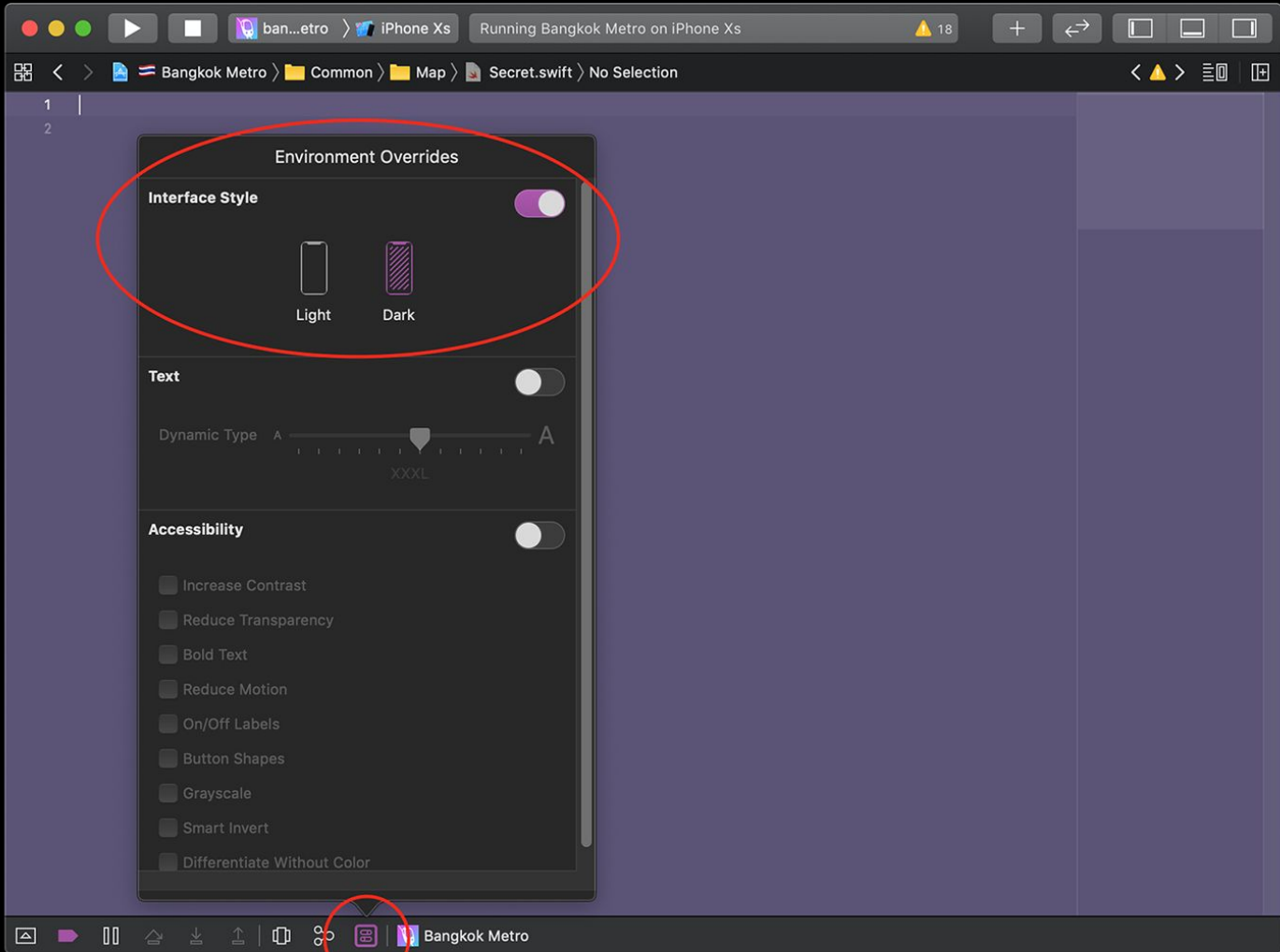


```
// Visual effect view blurring the background image
let blurEffect = UIBlurEffect(style: .systemThinMaterial)
let blurView = configureBlurView(effect: blurEffect)
view.addSubview(blurView)

// Visual effect view for vibrancy
let vibrancyEffect = UIVibrancyEffect(blurEffect: blurEffect, style: .secondaryLabel)
let vibrancyView = configureVibrancyView(effect: vibrancyEffect)
blurView.contentView.addSubview(vibrancyView)

// ... //
```





The background features a dark, almost black, space filled with vibrant, ethereal smoke or ink-like patterns. On the left, there are dense, swirling clouds of purple and magenta. In the center, there are vertical streaks and soft, glowing patches of cyan and light blue. On the right, there are more fluid, organic shapes in shades of pink, red, and a touch of yellow, resembling smoke or liquid in motion.

Como adotar o Dark Mode no Android

Android DayNight Theme



```
<style name="AppTheme" parent="Theme.AppCompat.DayNight">
  <!-- Customize your theme here. -->
  <item name="colorPrimary">@color/colorPrimary</item>
  <item name="colorPrimaryDark">@color/colorPrimaryDark</item>
  <item name="colorAccent">@color/colorAccent</item>
</style>
```

Night Mode

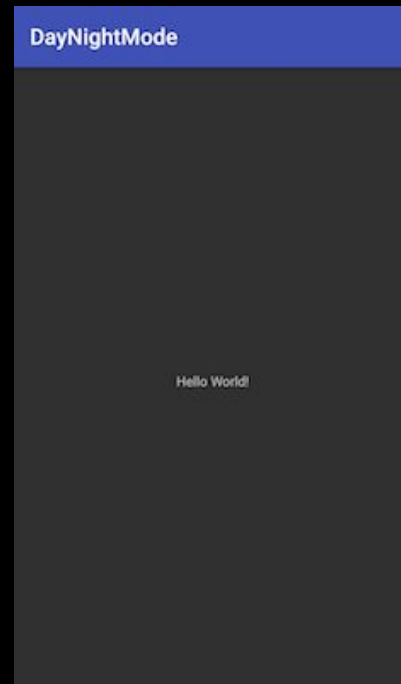
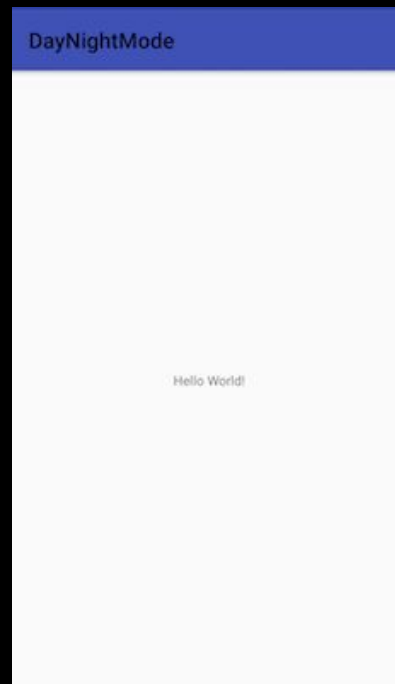
AppCompatActivity

MODE_NIGHT_YES

MODE_NIGHT_NO

MODE_NIGHT_FOLLOW_SYSTEM

MODE_NIGHT_AUTO



Atributos de Texto

?attr/colorPrimary

Custom Colors

```
night/colors.xml x
resources color
1 <?xml version="1.0" encoding="utf-8"?>
2 <resources>
3   <color name="colorPrimary">#3F51B5</color>
4   <color name="colorPrimaryDark">#303F9F</color>
5   <color name="colorAccent">#FF4081</color>
6   <color name="orange">#ff8200</color>
7   <color name="orangeDark">#f77000</color>
8   <color name="daynight_textColor">#ff8222</color>
9   <color name="switchColor">#BC2F1D</color>
10 </resources>
11
```

colors.xml from values-night folder

```
values/colors.xml x night/colors.xml x
1 <?xml version="1.0" encoding="utf-8"?>
2 <resources>
3   <color name="colorPrimary">#3F51B5</color>
4   <color name="colorPrimaryDark">#303F9F</color>
5   <color name="colorAccent">#FF4081</color>
6   <color name="daynight_textColor">#6CBABB</color>
7   <color name="switchColor">#911DEE</color>
8 </resources>
9
```

colors.xml from values folder

Resources Night

- ▼ res
 - ▼ drawable
 - ic_launcher_background.xml
 - placeholder.png
 - ▼ drawable-night
 - placeholder.png
 - ▶ drawable-v24
 - ▼ layout
 - activity_main.xml
 - ▶ mipmap-anydpi-v26
 - ▶ mipmap-hdpi
 - ▶ mipmap-mdpi
 - ▶ mipmap-xhdpi
 - ▶ mipmap-xxhdpi
 - ▶ mipmap-xxxhdpi
 - ▼ values
 - colors.xml
 - strings.xml
 - styles.xml
 - ▼ values-night
 - colors.xml

Identificando Dark Mode

UIModeManager



```
fun isDarkTheme(activity: Activity): Boolean {  
    return activity.resources.configuration.uiMode and  
           Configuration.UI_MODE_NIGHT_MASK == Configuration.UI_MODE_NIGHT_YES  
}
```

The background features a dynamic composition of colorful ink splashes and smoke-like patterns against a black backdrop. On the left, there are dense, swirling clouds of purple and magenta. In the center, a bright cyan or light blue splash dominates the upper half, with fine, vertical streaks extending downwards. On the right, there are vibrant splashes of pink, red, and yellow, appearing more fluid and organic in shape. The overall effect is one of movement and vibrant energy.

**Novamente,
o que evitar?**

TL;DR



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**Centro de Inovação que utiliza Design e
Tecnologia da Comunicação e Informação
para resolver problemas complexos de
um mercado muito diverso.**

**Com 630 colaboradores espalhados
por alguns estados do país.**



Antonio Silva



antoniosj



João Camelo

joorafaelcamelo



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Link dessa apresentação



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