



CPE405 ADV CPE 2560-01 #00
NAVADON KHUNLERTGIT

android

- The most popular mobile OS in the world
- Developed by Google
 - Initially developed by Android Inc. which Google bought in 2005
 - First commercial device: 2008
- Linux kernel / **Open source** / **Free** to use / **Free SDK**
- Designed primarily for touchscreen devices
 - Mobile, Tablet, TV, Auto, Wear
- Android RunTime (ART) virtual machine

android

- **2 billion** monthly active Android devices (Google I/O 2017)
- Samsung = **48.5%** of current market share in Android phone manufacturer
- Current released version: **7.1.2 Nougat**



Android 7.0 Nougat

A = Alpha
B = Beta
Then...



android

- To be released...
- Android 8.0 <name of dessert that begins with “O”>





Google Play

- Preferred method for distributing Android apps
- One-time **\$25** registration fee for developers
- 70:30 income shared between developer and Google
- No approval process (but can be removed without warning!)
- Apps can be free, paid, and/or include in-app purchases
- ~82 billion app downloads (wikipedia)
- ~3 million apps available (AppBrain.com [2017-08-07])





- Developers with most installs

Google Inc.

Estimated installs: 50B



Samsung Electronic...

Estimated installs: 5B



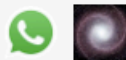
Facebook

Estimated installs: 5B



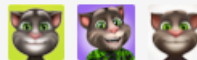
WhatsApp Inc.

Estimated installs: 2B



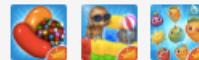
Outfit7

Estimated installs: 2B



King

Estimated installs: 2B



Microsoft Corporati...

Estimated installs: 2B



Instagram

Estimated installs: 2B



LINE Corporation

Estimated installs: 2B



Sony Mobile Comm...

Estimated installs: 1B



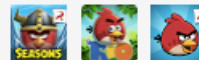
Gameloft

Estimated installs: 1B



Rovio Entertainme...

Estimated installs: 1B



BUSINESS OF APPS

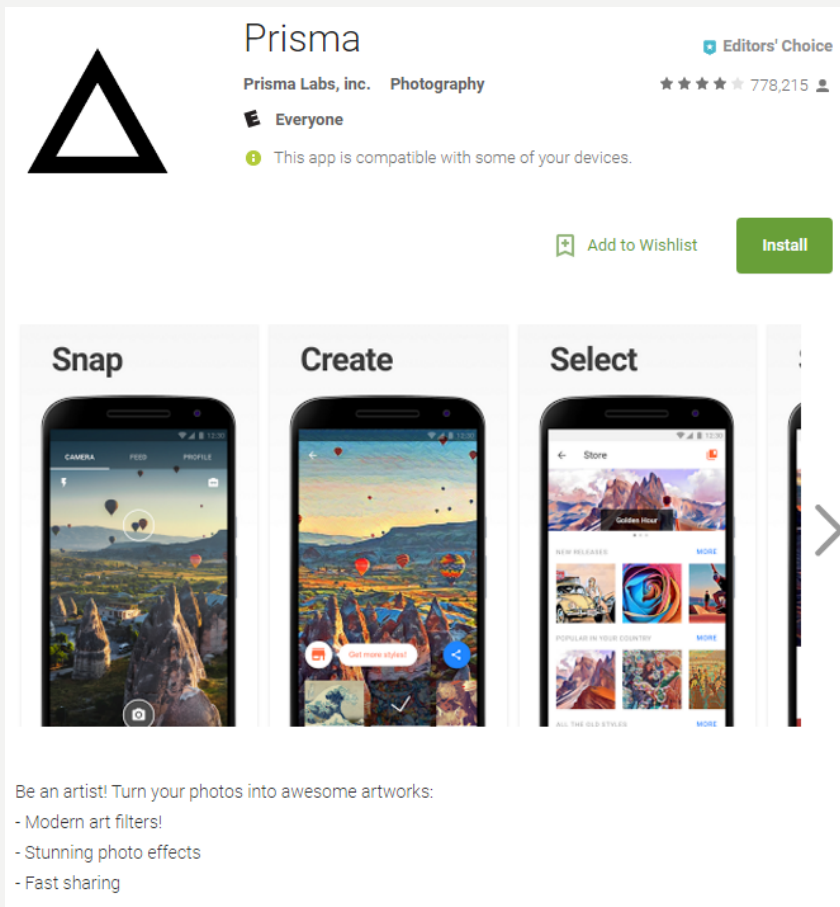
- Android vs iOS
- App Analytic Tools
 - Top search / Top categories
 - Country
 - CPI: Cost Per Install (not Consumer Price Index)

Android vs iOS

- Pros
 - File transfer via USB port and Android File Transfer Desktop App
 - Photo transfer via USB port without App
 - File manager available
 - Widgets available (iOS only in Notification Center)
 - Massive hardware selection:
 - Phone manufacturer
 - SDK versions
- Any of them can be a two-edged sword!

BEST APPS OF 2016 (IN THE US)

- Editor's choice



The screenshot shows the Google Play Store page for the Prisma app. At the top left is the Prisma logo, a black triangle. To its right, the app name "Prisma" is displayed, followed by "Prisma Labs, inc." and the category "Photography". A blue "Editors' Choice" badge is visible. Below this, there are five stars and the number "778,215" indicating the number of reviews. A small icon and the text "Everyone" indicate the age rating. A green note states "This app is compatible with some of your devices." At the bottom right of the header section are two buttons: "Add to Wishlist" and "Install". Below the header is a horizontal carousel of three smartphone screens. The first screen, labeled "Snap", shows a camera interface with a landscape photo. The second screen, labeled "Create", shows the same photo with various art filters applied. The third screen, labeled "Select", shows a gallery of different art styles for the user to choose from. Below the carousel, there is a promotional text: "Be an artist! Turn your photos into awesome artworks:" followed by a list of features: "- Modern art filters!", "- Stunning photo effects", and "- Fast sharing".

Prisma

Prisma Labs, inc. Photography

Editors' Choice

★★★★★ 778,215

Everyone

This app is compatible with some of your devices.

Add to Wishlist Install

Snap

Create

Select

Be an artist! Turn your photos into awesome artworks:

- Modern art filters!
- Stunning photo effects
- Fast sharing

- More at...

https://play.google.com/store/info/topic?id=merch_topic_b0000b2_apps_TopicPage_bestof2016

GLOBALLY?

- Top Trending Apps
 - Face Changer 2 (funny effect)
 - Lumyer (cool effect)
 - Castbox (Podcast radio music)
 - Emoji Keyboard Pro
 - MSQRD (Face Swap/Selfie by Facebook)
- Top Trending Games
 - Pokemon GO
 - Clash Royale (Clash of Clans: build village, raise clan, and war)
 - Traffic Rider (motorbike racing)
 - slither.io (snake!)
 - Dream League Soccer (FIFA/PES-like)

HOW ABOUT THAILAND?

- Best App: **Prisma**
- Most Innovative: **Camera 360Lite** / Waze (GPS) / Grab / VivaVideo / Eatigo (restaurant discount)
- Most Share-worthy: **AliExpress** / GoKeyboard / SNOW (selfie) / TrueMoney / SnapChat
- Most Beautiful: **PicsArt** / Piggipo / Shake-itAlarm / Colorfy (coloring book) / Airbnb
- Best Local: **Kaidee** / Wongnai / Ookbee / Wink Camera / Keyboard Man Man
- Best Self-Improvement: **7-min workout** / Water Drink Reminder / Memrise (Learning Languages) / LinkedIn / Learn English

HOW ABOUT THAILAND?

- Devices most used. (AppBrain.com [2017-08-07])

Model	Market share
Samsung Galaxy J7	5.3 %
Samsung Galaxy J7(2016)	4.1 %
Samsung Galaxy J2	4.1 %
Samsung Galaxy J2 Prime	3.9 %
Oppo A37f	3.4 %
Samsung Galaxy J7 Prime	3.3 %
Oppo A1601	1.8 %
Samsung Galaxy Core Prime	1.5 %
Vivo 1601	1.5 %
Samsung Galaxy Note3	1.5 %

ANDROID APP DEVELOPMENT



- Android Studio

- Official IDE for Android
- Based on JetBrains' IntelliJ IDEA
- Current stable version: 2.3.3 [2017-06-08]
- 3GB RAM minimum plus 1GB for the Android Emulator
- Recommended: **8GB RAM and your own Android device.**
- Disk storage: **2GB++**
 - Android Studio + Android SDK + JDK



TOPICS

- Android Fundamentals
- Material Design
- Single Screen App
- Multi Resolution/Multi Language App
- Multi Screen App
- Activity Lifecycle
- Design Pattern (MVP, MVVM)
- RecyclerView, CardView
- Fragment
- Media and Camera
- If time allows...
 - Adding Libraries
 - Using Google API
 - Monetization
 - App Analytic Tools

**BYE
FOR
NOW**



GOT QUESTIONS?