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# **CHALLENGES IN FRONT OF MOBILE APPLICATIONS DEVELOPMENT**



OR



WHAT SHOULD WE HAVE IN  
MIND BEFORE WE RUSH INTO  
DEVELOPING A MOBILE  
APPLICATION

INDEX

**What is mobile app?**

**Development technologies**

**Design**

WHAT IS MOBILE APP?

**Working definition:**

**A program or web site  
designed and adapted for  
mobile devices**

WHAT IS MOBILE APP? >> PLATFORMS

**iOS**

**Android / AOSP**

**Windows Phone**

**Symbian, Blackberry**

**Web Apps**

WHAT IS MOBILE APP? >> FEATURES

**Graphics / animations / video**

**Sound**

**Hardware sensors**

**Services & Notifications**

**Connecting with other devices**

DEVELOPMENT TECHNOLOGIES

**Knowledge & Experience**

**Time limitations**

**Required Features**

**Target markets**

**Other**



DEVELOPMENT TECHNOLOGIES >> NATIVE

**+ Best performance**

**+ All available features**

**+ Best support**

**--- Separate code / programming  
language for each platform**

## DEVELOPMENT TECHNOLOGIES >> NATIVE

**Android – Java, VMs, Activities, Services, Intents,  
Providers & Receivers**

**iOS – Objective C, Messages, Automatic Reference  
Counting**

**Windows Phone – .NET (C#, VB.NET), Metadata,  
Events, States**

## DEVELOPMENT TECHNOLOGIES >> PHONEGAP

- + Easier to code (HTML / JS / CSS / AJAX)**
- + One code for all platforms (well... almost)**
- + Decent features list**
  
- Poor graphic / multimedia performance**
- Lack of pre-built UI / Design differences between platforms**

## DEVELOPMENT TECHNOLOGIES >> MOBILE WEB

**+ Easiest to code**

- Lack of most native features**
- Browser differences**
- Poor performance**
- It is not even an app**

DESIGN

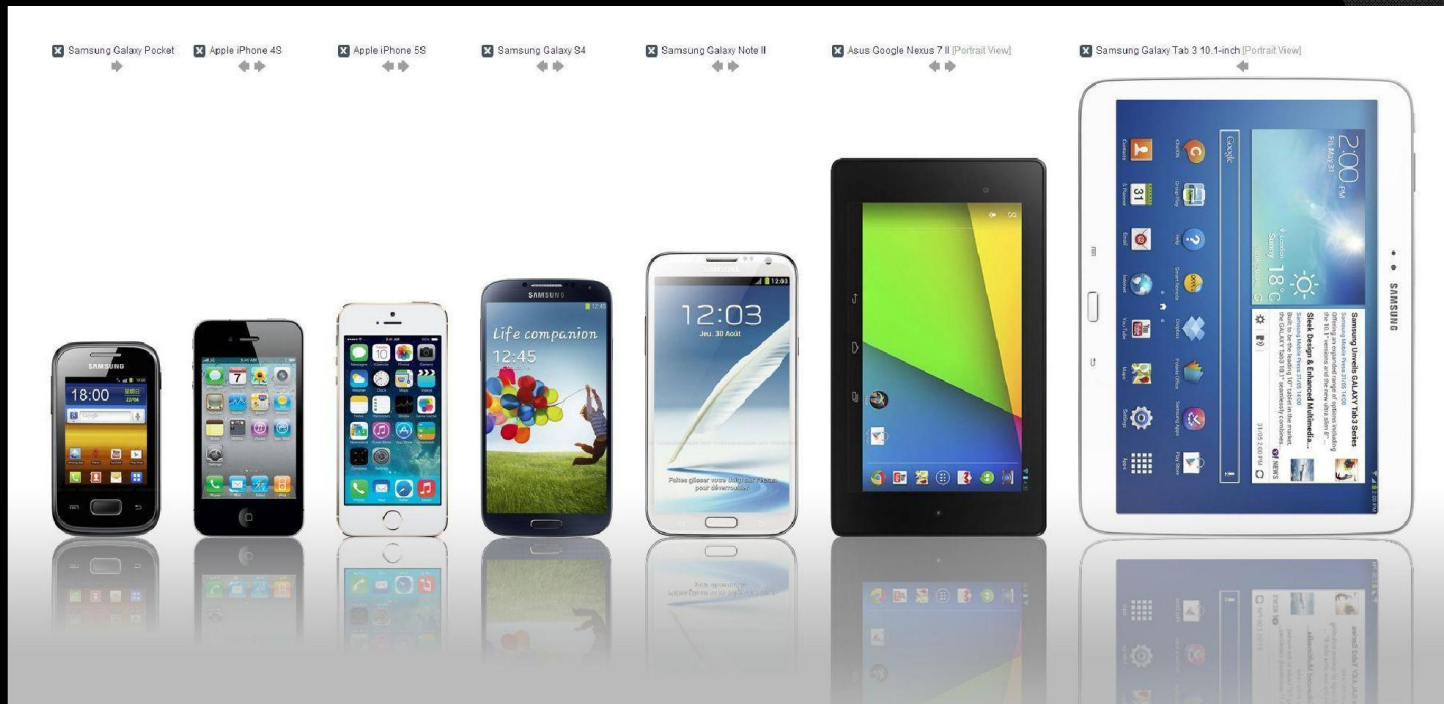
**Device types & orientations**

**Resolutions & Dimensions**

**UI Limitations**

**UI Frameworks**

# DESIGN >> DEVICE TYPES & ORIENTATIONS



DESIGN >> RESOLUTIONS & DIMENSIONS

**Resolution**

**Pixel density**

**Aspect ratio**

## DESIGN >> RESOLUTIONS & DIMENSIONS

Aspect ratio	Resolutions	Example Devices
4:3	320×240	Android devices
	1024×768	iPad 1, iPad 2
	2048×1536	iPad 3
3:2	480×320	iPhone 3GS and lower, Android devices
	960×640	iPhone 4, iPhone 4S
16:10	800×480	Android devices, WindowsPhone7
	1280×800	Android tablets like Google Nexus 7, Samsung Galaxy Tab 10.1, Motorola Xoom, Asus Eee Pad Transformer
17:10	1024×600	Android tablets like Samsung Galaxy Tab 7
16:9	640×360	Symbian3 devices like Nokia C7
	854×480	Android devices, MeeGo N9
	1136×640	iPhone 5



DESIGN >> UI LIMITATIONS

**Limited space**

**No hovers**

**Slow typing Responsiveness**

**Usage situation**

DESIGN >> UI COMPONENTS

## **Custom UI Frameworks**

**jQuery Mobile**

**Sencha**

**KendoUI**

**Q & A**