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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

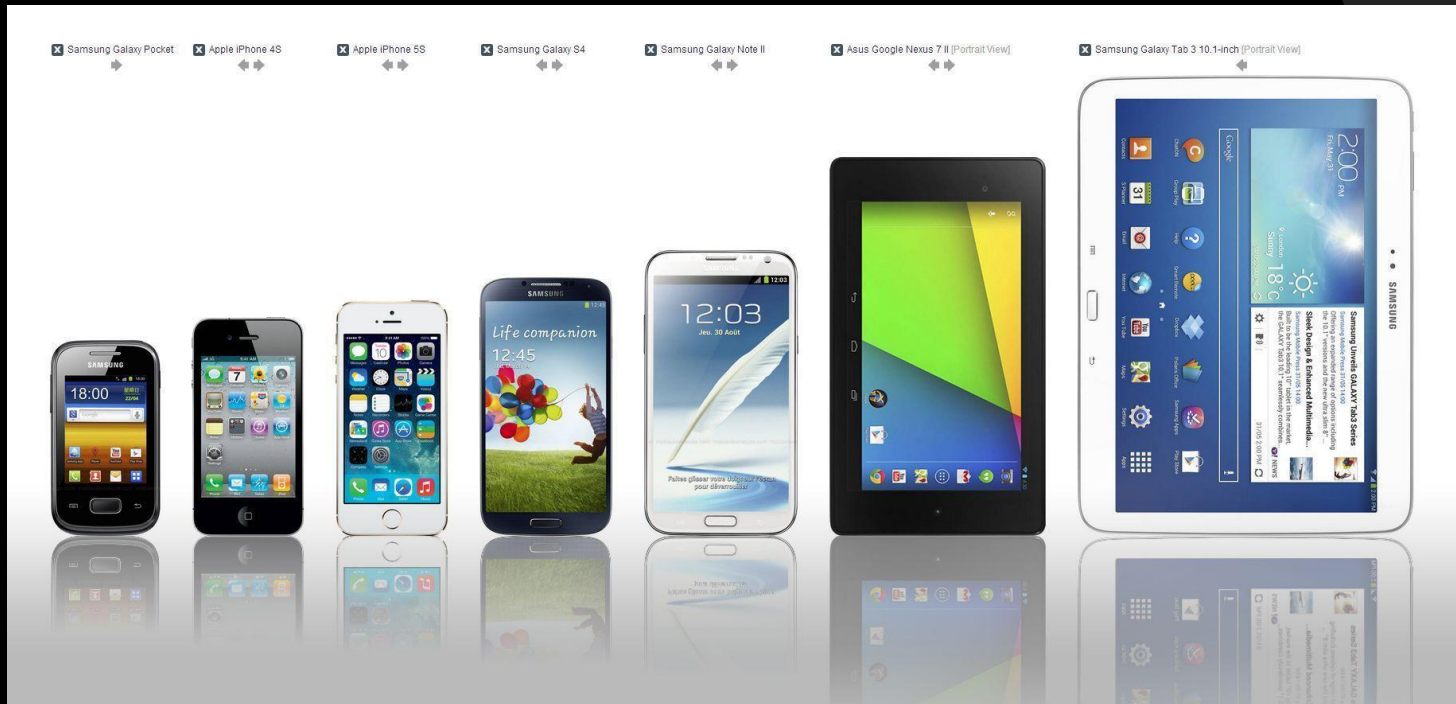
Device types & orientations

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