Tech stack: Kotlin, Swift, Flutter, React Native, Ionic

Platforms: Android, iOS, Web (?)

Testing tools

* Mobile: GameBench, Apptim, built-in profiling tools
* Web: GTmetrix, WebPageTest, Insights (Web)

Environment:

* Mobile: Android phones, iPhone, emulators (?)
* Web: different browsers (?)

Metrics:

* Mobile: CPU, memory, power, FPS, app size, launch time
* Web: web metrics, e.g. LCP, SI
* Both: Code lines

Example apps:

* Simplest as baseline, e.g. counter app
* Duplicated components to check frameworks’ build optimization (e.g. widget / element tree)
* Lists: scrolling, rendering, filtering (e.g. gifs from Giphy API)
* File I/O
* Rotating images/animations
* Real-world application: movies API, show movies, search for one, show details
* Image processing (display->replace->move with animation->apply filter->scale to size)
* Text processing (long text of random characters in a scrollable text field->font size change->replace with longer random text->change font color->underline)
* UI (screen with drawer and tabbar->buttons display->button clicked->delete buttons->display text fields->set text in fields->delete fields->display list->scroll)
* Camera (take a picture and present it / select many pictures/videos from gallery and present them)

Possible extensions:

* possible optimization techniques