

## Android Application Technical Test

### Carousels

#### Objective:

Create a native Android based application exhibiting MVVM/MVP pattern which runs on Android tablets. Users should be able to scroll a vertical list of elements, which each element capable of being independently scrolled horizontally.

No tasks must be changed by the candidate. In case of uncertainty, please contact the employer.

#### Primary tasks:

- Single activity application (use fragments/action bar as required).
- Tablet form factor
- Replicate the carousel demo application (see screenshot below).
- Implement a vertical RecyclerView (taking up all available screen size), which consists of child RecyclerViews of horizontal orientation. All horizontal rows must scroll independently of each other (no Grid arrangement).
- Async load and show a 2D data array of simple title/image elements.
- Titles can be randomly generated, images should async load as they are shown on screen from random images generated by <http://www.colourlovers.com/api/patterns/random> (imageUrl field)
- Clicking on a screen element should display a toast of the Title
- No third-party code/libraries must be used for UI

#### Bonus Tasks

- Instead of using a toast, add a full screen semi-transparent overlay of the title/image on element click
- Add a Splash screen which disappears to reveal all initial elements loaded.
- Phone form factor support

#### Evaluation criteria:

- All primary tasks completed.
- Objective oriented design with clearly separated and loosely linked entities (use MVVM, MVC or other classic patterns).
- Good use of caching (file, memory caching; data preloading)
- Usage of data structures
- Clear concise layout files
- Use Multithreading/Asynchronicity when needed

#### Deliveries:

- Source code and this document with release notes available through GitHub or other Git/SVN public repository
- The source code must compile with no errors on Android environments
- The repository must contain a prebuilt Android binary (APK) compiled in Release configuration

