

iOS Application Technical Test

Senior Level - Carousels

Objective:

Create a native iOS application exhibiting MVVM/MVC patterns which runs on iOS9+ devices. 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 ViewController application (use child VC's as required)
- Tablet form factor
- Replicate the behaviour of the demo application (see screenshot below). No Tab bar required.
- Implement a vertical Table View (taking up all available screen size), which consists of child Collection Views 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). If time constrains, randomly generated colours can be used as backgrounds instead.
- Clicking on a screen element should animate the item into a fullscreen ViewController displaying the tile
- No third-party code/libraries must be used for UI
- Programmatic layouts only (no Storyboards/xibs)

Bonus Tasks

- Use of AutoLayout for layouts
- Use of downloaded images, not randomly generated backgrounds.
- Improve the UX of the demo application

Evaluation criteria:

- All primary tasks completed with solid design principles. No unnecessary gloss needs to be applied.
- 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 layout constraints
- 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 in an iOS environment

