

Coding Exercise

Requirements and Specifications

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Requirements

- for UX
 - Write an app that either gets the list of the most recent pictures or gets the list of the most interesting pictures from Flickr, depending on what the user chooses.
 - This app should display the images in a paging view.
 - UI should use a collection view to showcase images.
- for Architecture
 - The API calls can not be blocking (i.e., should be asynchronous).
 - The application main thread (i.e., UI thread) needs to be notified once the call response is ready, so that it can refresh its display.
 - This service layer should be designed so that it could be reused if the application were to grow. It should not be tied to this particular UI.

Basic Specs

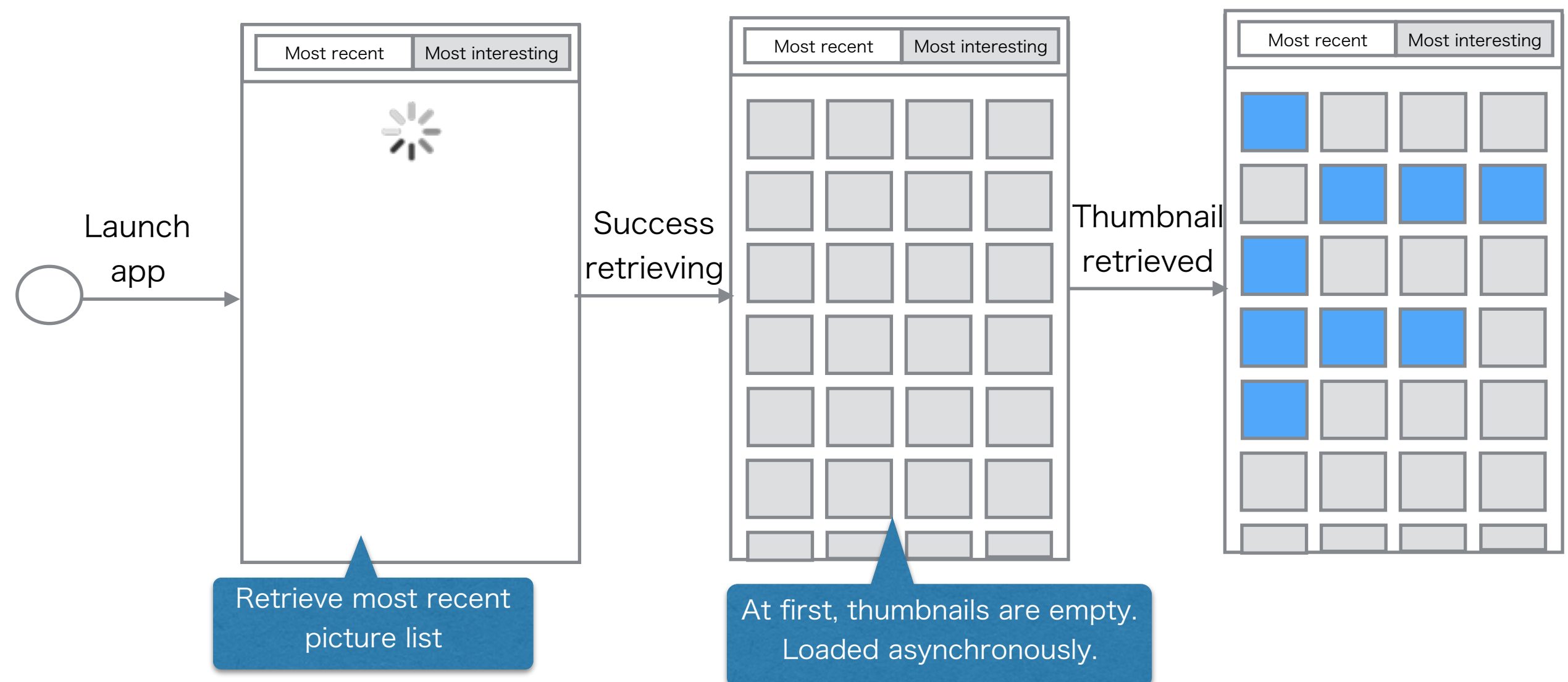
- AppName
 - FlickrPictureViewer
- Supported iOS
 - iOS 8.x, 9.x
- Supported Device
 - iPhone, iPad
- Supported Orientation
 - All (Instead of UpsideDown in iPhone)
- UI Language
 - English

Functional Specs

- User can see picture list in Flickr.
 - There are 2 types of picture list.
 - Most recent pictures.
 - Most interesting pictures.
 - User can select picture type.
 - App shows thumbnails of picture list of selected type.
 - App shows latest 100 pictures in each list.
 - Thumbnails are retrieved asynchronously.
- User can see selected picture by full screen.
 - User can select a picture in thumbnail list.
 - App shows selected picture by full screen.
 - Picture is retrieved asynchronously.
 - While retrieving picture, app shows thumbnail image instead of picture.
 - User can zoom picture by pinch in/out. (Max 4x)
 - User can change displayed picture by left/right swipe.
 - User can show/hide menu by tapping screen.

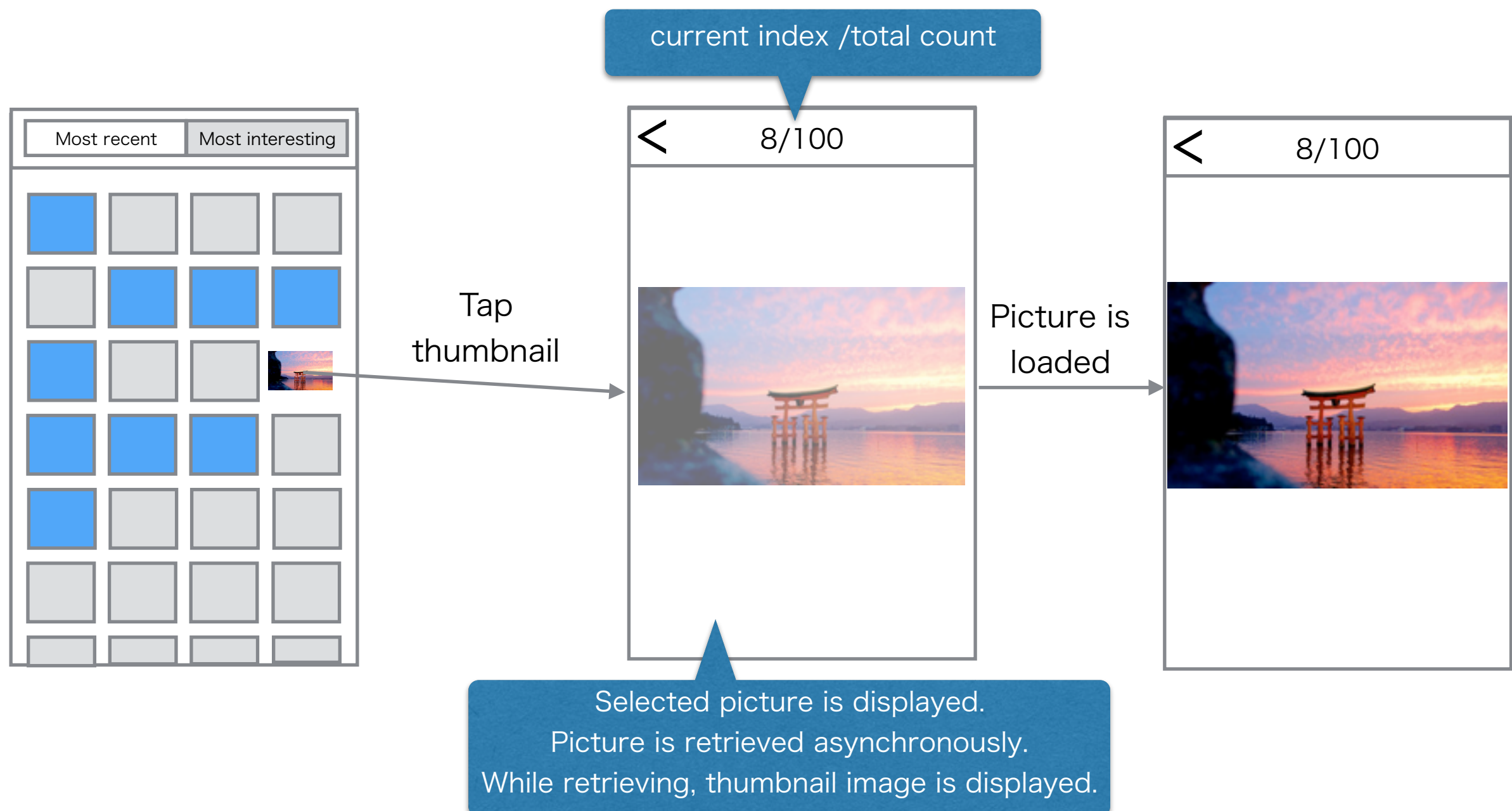
Main scenarios

- Selects picture and see it. (1/2)



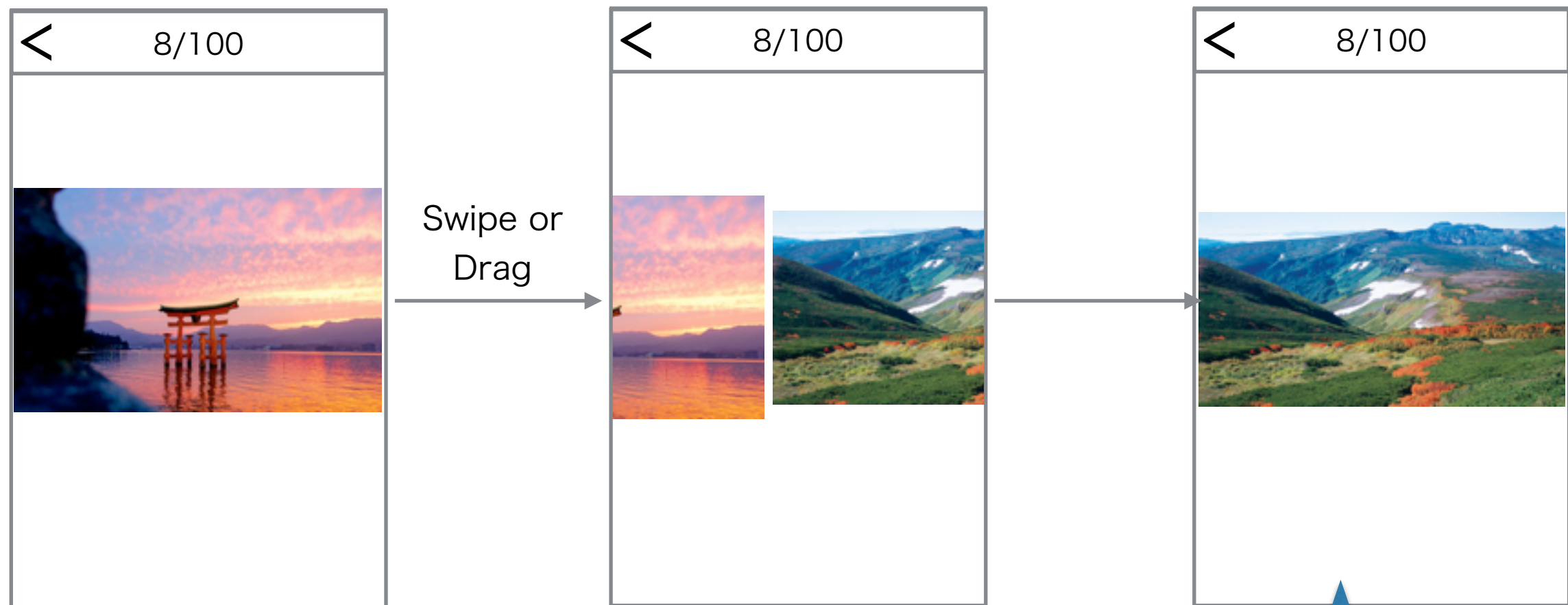
Main scenarios

- Selects picture and see it. (2/2)



Main scenarios

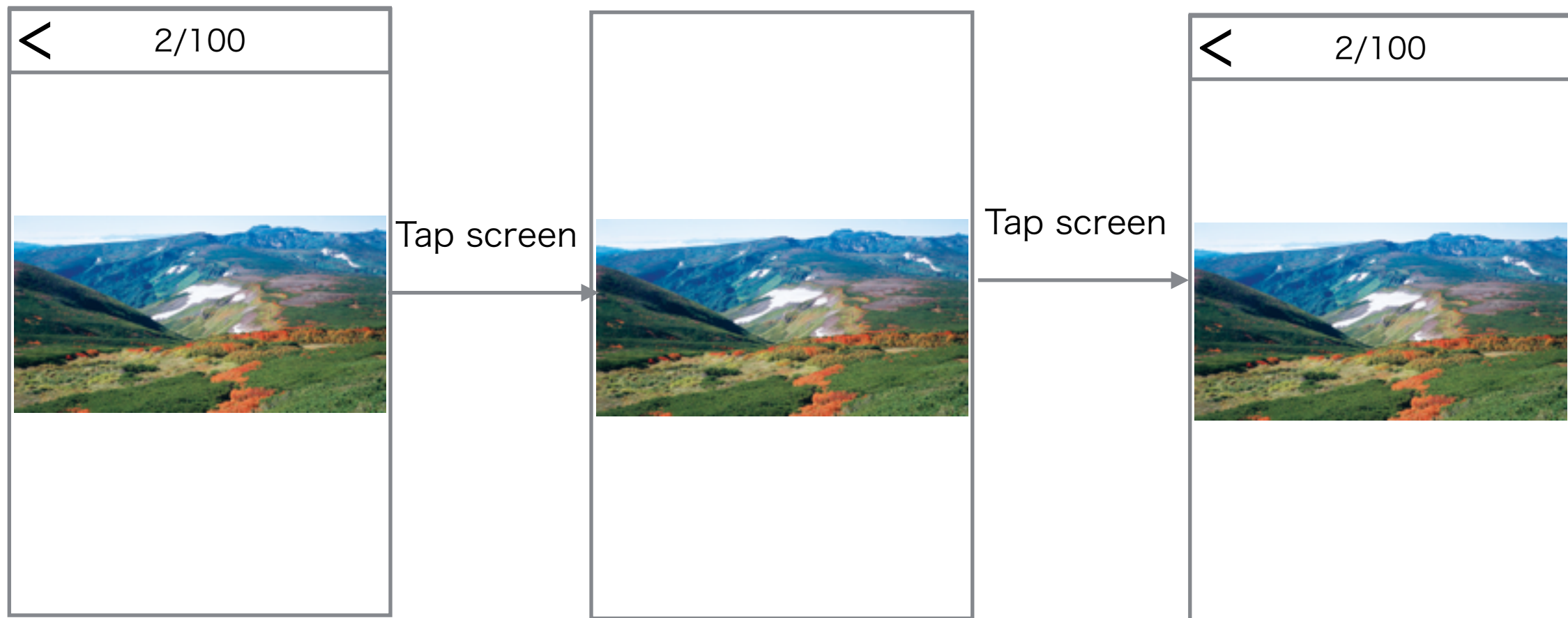
- Change picture by swipe.



Pictures order is same as thumbnail list

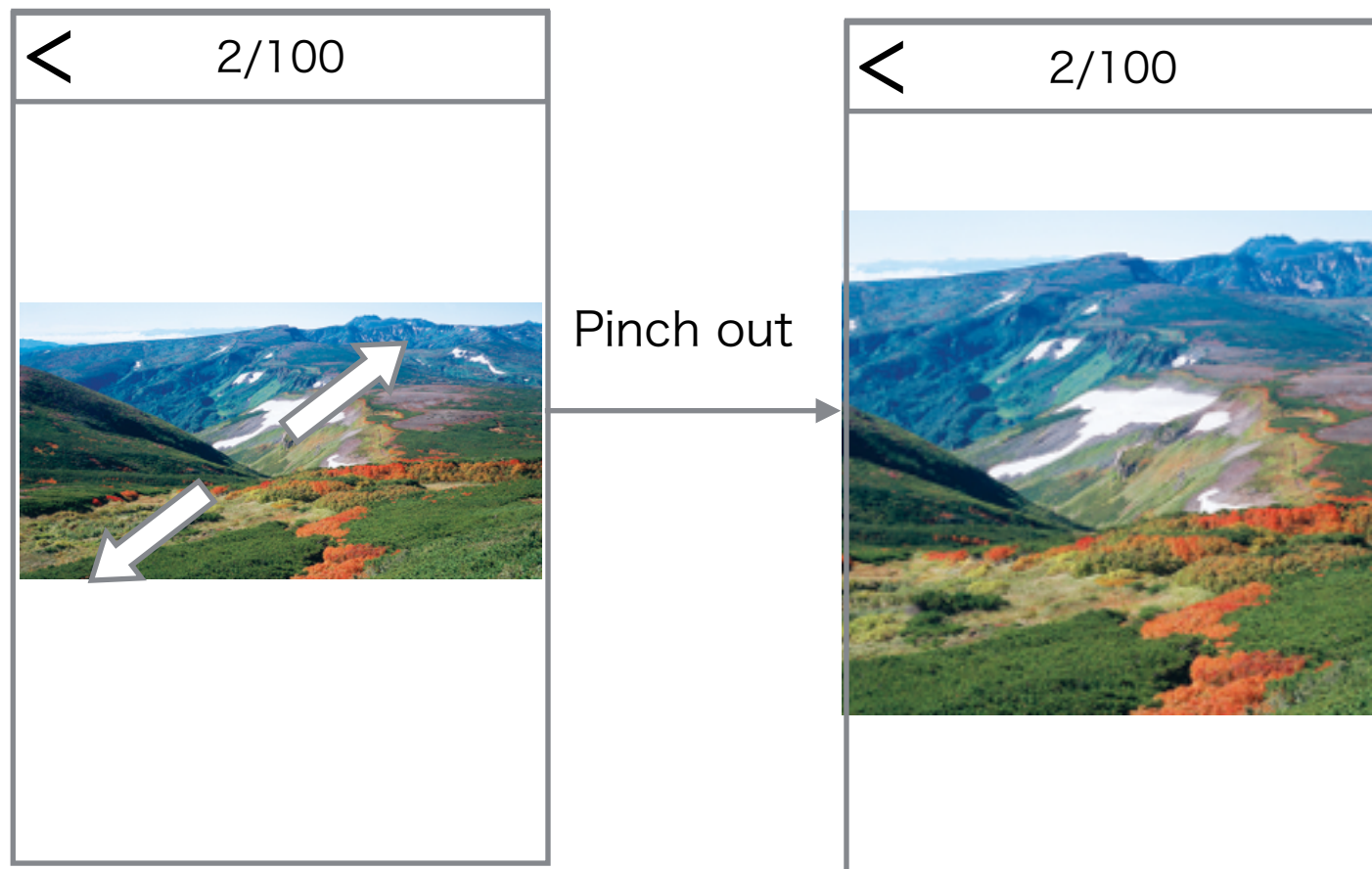
Main scenarios

- Show/Hide menu



Main scenarios

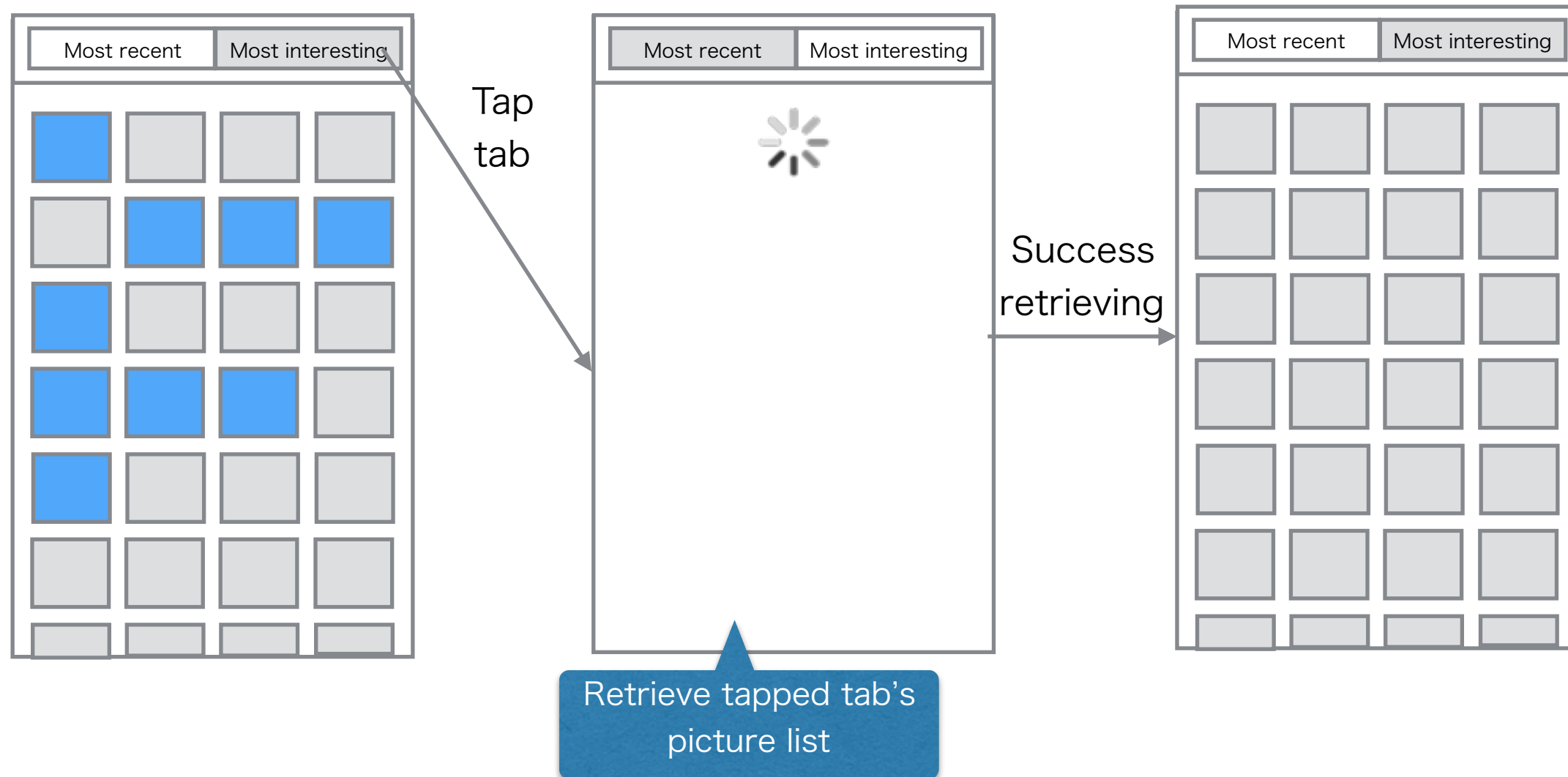
- Zoom picture



Main scenario

- Switch picture list

App retrieves picture list every tab changed.
Because Flickr's data is updated often.



Error cases

- Retrieve picture list failed.
 - Display error dialog.
 - “Cannot retrieve picture list in Flickr.”
- There was no picture in Flickr. (Maybe very rare case)
 - Display empty list.
- Retrieve thumbnail image failed.
 - Display special error image.
- Retrieve picture failed.
 - Display special error image.