Mobile Application Development
Aileen Pierce

NOTIFICATIONS

Notifications

- Notifications are a useful way for an app to communicate with users
- Notifications can tell a user it has information for them or notify them of a timely event
- Local notifications are scheduled and sent by the app locally
- Remote notifications are sent from a remote server and pushed to the app by Apple's Push Notification Service(APN)

Local Notifications

- Apps must request permission to register notification types using **`registerUserNotificationSettings(_)`** in the **`UIApplication`** class during launch
- **`UIUserNotificationType`** is an enum of notification types
  - Banners
  - Alerts
  - Badge
  - Sound

Local Notifications

- Users can change the notification permission and type in Settings
- Make sure your app handles the case of notifications not being granted permission
- **`currentUserNotificationSettings()`** in the **`UIApplication`** class returns the users notification settings for the app

Local Notifications

- You can also specify custom actions that can be used in response to notifications
  - The app doesn't even have to be launched to handle the actions
  - Related actions can be grouped into categories
- Don't get carried away with notifications, too many, or ones that don't add value, will be annoying and cause the user to turn them off or stop using your app

Local Notifications

- The `UILocalNotification` class lets you define local notifications
  - alertBody
  - alertAction
  - fireDate
  - soundName
  - userInfo
  - category
  - applicationIconBadgeNumber

Local Notifications

- **`scheduleLocalNotification()`** in the **`UIApplication`** class schedules local notifications
- **`cancelLocalNotification()`** in the **`UIApplication`** class cancels local notifications
- **`scheduledLocalNotifications`** returns an array of all scheduled local notifications

Local Notifications

- iOS allows up to 64 notifications to be scheduled and fired
  - Notifications over 64 are discarded
- Local notifications automatically fire if the app is not in the foreground
- Notifications are not displayed if the app is in the foreground
  - **`application(_, didReceiveLocalNotification)`** is called when the app is in the foreground

Dates

- The **`NSDate`** class describes both date and time
- The **`NSDateComponents`** class provides access to individual components of the date and time
- The **`NSDateFormatter`** class lets you convert NSDate objects to Strings and vice versa
  - Provides predefined date styles
  - Lets you manually describe a desired format using data format specifiers