Lab - Mobile Device Features (Instructor Version)

**Instructor Note**: Red font color or gray highlights indicate text that appears in the instructor copy only.

# Introduction

In this lab, you will set the autorotation, brightness, and turn GPS on and off.

# Recommended Equipment

* Android tablet or smartphone running Android version 5.0 or higher.
* iOS tablet or smartphone running iOS version 7.0 or higher.

**Note**: If the recommended equipment is not available, Android or iOS emulators can provide some familiarity with Android and iOS devices. Search the internet to find Android and iOS emulators.

**Instructor Note**: This lab must be completed by students even if the recommended equipment is not available. This lab is designed to provide students with familiarity with Android and iOS Features.

**Instructor Note**: Due to the variety of Android and iOS devices and operating systems, some of the paths and locations of items may be different than those in this lab. Consult the manual of the Android and iOS device used to determine the correct instructions for your device. Encourage students to search the internet for instructions.

# Instructions

## Auto-Rotation

Auto-rotation is a common feature found on modern mobile devices. It allows the screen format to switch automatically between **landscape** and **portrait** modes, depending on how the user is holding the device. This section examines how to turn **auto-rotation** on or off on Android and iOS devices.

### Auto-Rotation on Android

* + - 1. Turn on the device and log in with the password, PIN, or other passcode, if necessary.
      2. To access the auto-rotation function, open the notification panel and tap the **Screen rotation** icon. Verify that auto-rotation function is disabled.

Auto-rotation function may also be accessible by displaying all apps on the Home screen and navigate to **Settings**. Tap **Display** or **Accessibility**. Tap **Auto-rotate screen** to verify that the auto rotation is off.

* + - 1. With auto rotation turned off, rotate the device 90 degrees clockwise.

#### Question:

What happens to the screen?

Type your answers here.

The screen remains in the same orientation.

* + - 1. Enable auto-rotation. Tap **Auto-rotate screen** to enable it.
      2. Rotate the device 90 degrees clockwise again.

#### Question:

What happens to the screen?

Type your answers here.

The screen rotates to match the orientation of the device.

* + - 1. Touch the **Home** button to return to the home screen.

### Auto Rotation on iOS

* + - 1. Turn on the device and log in with the password, PIN, or other passcode, if necessary.
      2. Swipe down from the top right corner of the screen to access **Control Center**.
      3. Touch the **auto-rotation lock** icon to enable **auto-rotation lock**; the icon is represented by a clockwise circular arrow going around a lock.
      4. Open the **Calculator** app.
      5. Rotate the device 90 degrees clockwise.

#### Question:

What happens to the screen?

Type your answers here.

The screen remains in the same orientation.

* + - 1. Swipe down from the top right corner again to access the **Control Center**.
      2. Touch the **auto-rotation lock** icon again to de-activate it.
      3. Swipe up from the bottom to close the **Control Center**. Rotate the device 90 degrees clockwise.

#### Question:

What happens to the screen?

Type your answers here.

The screen rotates to match the orientation of the device.

## Brightness

### Brightness on Android

* + - 1. To access the brightness function, swipe down on the status bar and locate the brightness slider.

Or display all the apps on the Home screen, navigate to **Settings** > **Display**.

* + - 1. Touch **Brightness level** and move the slider all the way to the right.

#### Question:

What happens?

Type your answers here.

The screen gets brighter.

* + - 1. To enable Adaptive brightness, touch the **Adaptive brightness** toggle to enable it.

#### Question:

What happens when **Adaptive brightness** is enabled?

Type your answers here.

Answers may vary. The brightness of the screen should adjust itself based on the amount of environmental light.

* + - 1. Touch the **Adaptive brightness** again to disable it.
      2. Move the slider all the way to the left.

#### Question:

What happens?

Type your answers here.

The screen gets darker.

* + - 1. Touch the **Home** button to return to the **home screen**.

### Brightness on iOS

* + - 1. Swipe down from the top right corner to access the **Control Center**.
      2. Drag the brightness level up or down to your desired brightness level.
      3. To configure other brightness settings, go to **Settings** **> Display & Brightness**. The **Display & Brightness** screen appears.
      4. You can manually switch between Light and Dark modes. You can also toggle Automatic on so that the phone enters dark mode when the sun sets. Tap Options to configure a **Custom Schedule**.
      5. Returning to the Display & Brightness main screen, notice the option to change the text size and whether text is bold or not.
      6. Under **Brightness**, there is a setting for **True Tone**. Enable it to have the iPhone automatically adapt based on ambient lightening conditions.

#### Question:

What other things can you configure in **Display & Brightness**?

Question:Type your answers here.

You can configure Night Shift which automatically shifts the colors of your display to the warmer end of the color spectrum after dark. You can configure Auto-Lock to lock your phone after a set number of minutes. You can toggle Raise to Wake which will wake your phone when you pick it up. Finally, you can configure Display Zoom to show Larger Text.

## GPS

Another common feature on modern mobile devices is **GPS** or **Location Services**. By using Global Positioning System signals, mobile devices are able to learn and inform the user about the current location with good accuracy.

### GPS on Android

* + - 1. To access the location function, swipe down on the status bar and tap **Location** to disable the GPS location.

Or display all the apps on the Home screen, navigate to **Settings** > **Location** and tap on the toggle to disable the GPS location.

* + - 1. Open the **Maps** app.

#### Question:

How is the device able to determine the location?

Type your answers here.

Depending on the device, the wireless network function can provide an approximate location.

Force **Maps** to locate you with more accuracy by touching the **crosshair** icon.

#### Question:

What happens?

Type your answers here.

Because Location is turned off, Android asks permission to turn it on.

* + - 1. Allow Android to turn on Location. Your device should now have an accurate representation for your current location.
      2. Touch the **Home** button.

### GPS on iOS

* + - 1. Go to **Settings > Privacy & Security > Location Services**. The **Location Services** screen appears.

iOS allows the user to decide what apps have access to the GPS.

#### Question:

What apps are using Location Services on your device?

Type your answers here.

Answers may vary.

* + - 1. Turn **Location Services** off. A warning message may appear stating that the Location Services will be disabled.
      2. Swipe up from the bottom to close **Location Services**.
      3. Locate and open the **Maps** app.

**Note**: You may be asked to allow **Maps** to use **Location Services**. If this happens, touch **Allow** to add **Maps** to the list of apps that can use **Location Services**.

* + - 1. A dialog opens that tells you to turn on **Location Services** to allow Maps to determine your location. Touch Settings to open Location Services again. Alternatively, swipe up to access the Home screen and go to **Settings > Privacy & Security > Location** services.
      2. Turn Location Services on.
      3. Return to the Maps app and touch the arrow in the top right corner to show your device’s current location.

#### Question:

Was iOS able to locate you and the device?

Type your answers here.

iOS probably can locate you and the device. It may depend on geographic location and the app permission.

* + - 1. Swipe up to return to the Home screen.

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