

Lab - Mobile Device Features

Introduction

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

Recommended Equipment

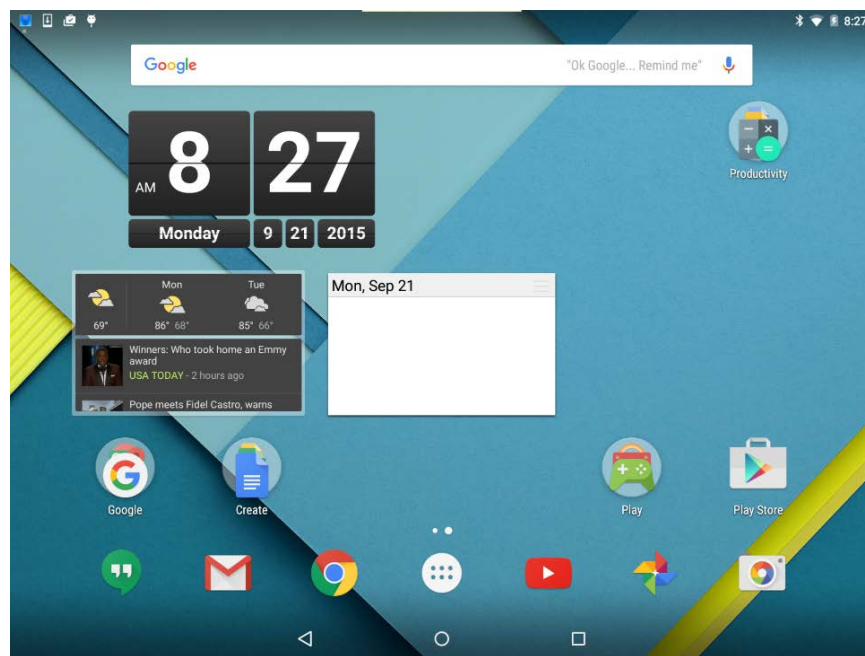
- Android tablet or smartphone running Android version 5.0 or higher
- iOS tablet or smartphone running iOS version 7.0 or higher.

Part 1: 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.

Step 1: Auto-Rotation on Android

- Turn on the device and log in with the password, PIN, or other passcode, if necessary.

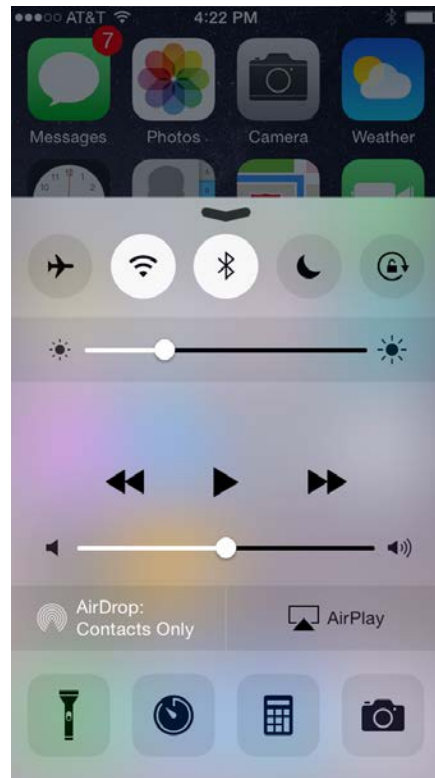


- Go to **All Apps > Settings > Display** (under the **Device** category)
- Touch **When the device is rotated** and select **Stay in current orientation**.
- Rotate the device 90 degrees clockwise. What happens to the screen?
- Rotate the device 90 degrees counter-clockwise.
- Touch **When the device is rotated** again and select **Rotate the contents of the screen**.

- g. Rotate the device 90 degrees clockwise again. What happens to the screen?
- h. Touch the **Home** button to return to the home screen.

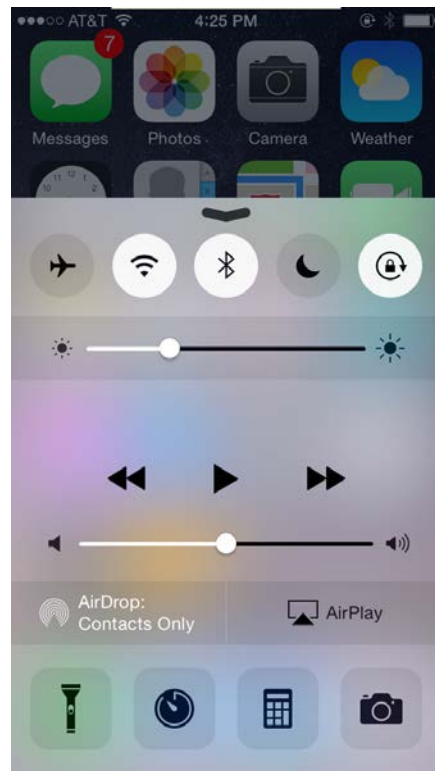
Step 2: Auto Rotation on iOS

- a. Turn on the device and log in with the password, PIN, or other passcode, if necessary.
- b. Swipe up from the bottom of the screen up to access **Control Center**.

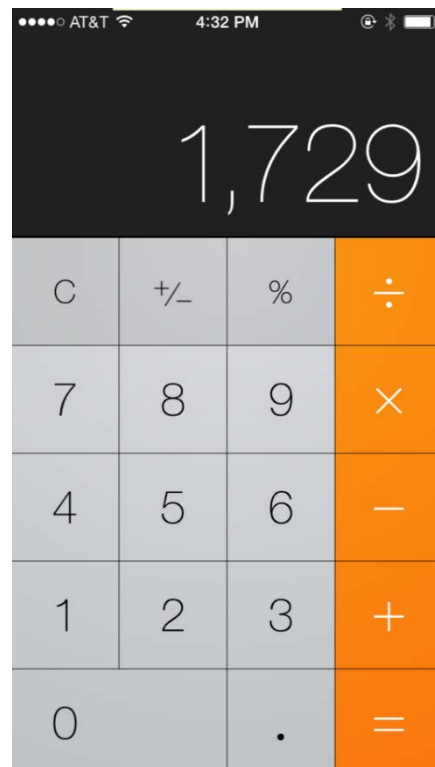


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- c. Touch the **auto-rotation lock** icon to enable **auto-rotation lock**; it is the fifth icon in the row of icons and represented by a circular arrow going around a lock



- d. Open the **Calculator** app.

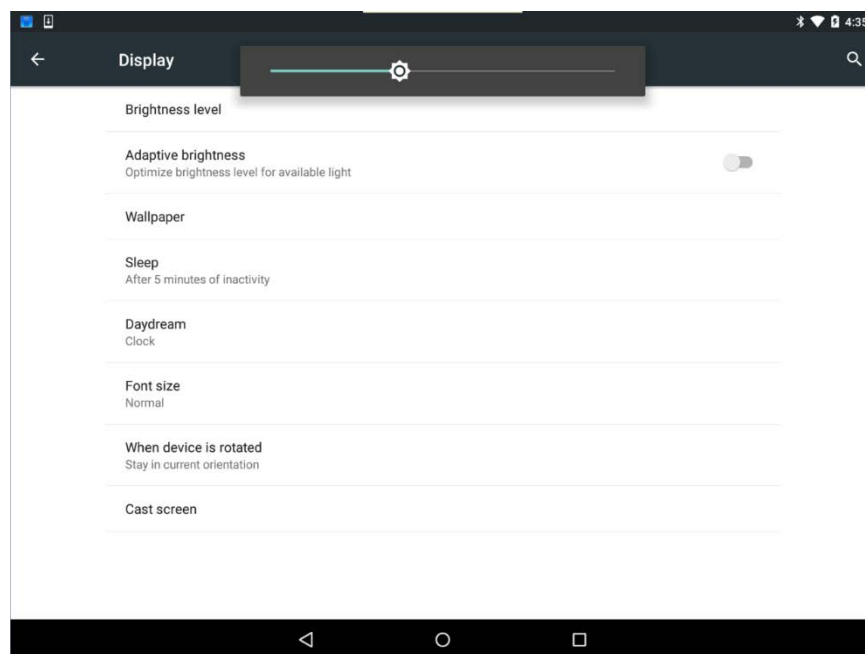


- e. Rotate the device 90 degrees clockwise. What happens to the screen?
- f. Swipe up from the bottom of the screen to access the **Control Center** again.
- g. Touch the **auto-rotation lock** icon again to de-activate it.
- h. Press the **Home** button.
- i. Open the **Calculator** app.
- j. Rotate the device 90 degrees clockwise. What happens to the screen?
- k. Click the **Home** button to return to the home screen.

Part 2: Brightness

Step 1: Brightness on Android

- a. Go to **All Apps > Settings > Display** (under the **Device** category).
- b. Touch **Brightness level**. A brightness slider appears.

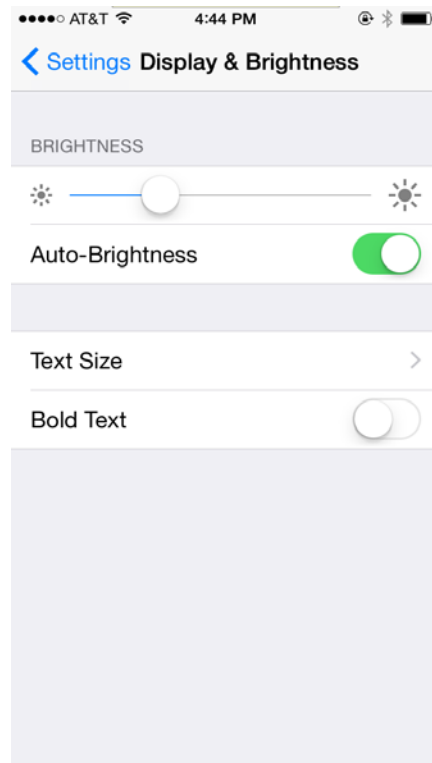


- c. Move the slider all the way to the right. What happens?
- d. Touch the **Adaptive brightness** toggle to enable it. The **Adaptive brightness** toggle is located right below the **Brightness level**.
What happens when **Adaptive brightness** is enabled?
- e. Touch the **Adaptive brightness** checkbox.

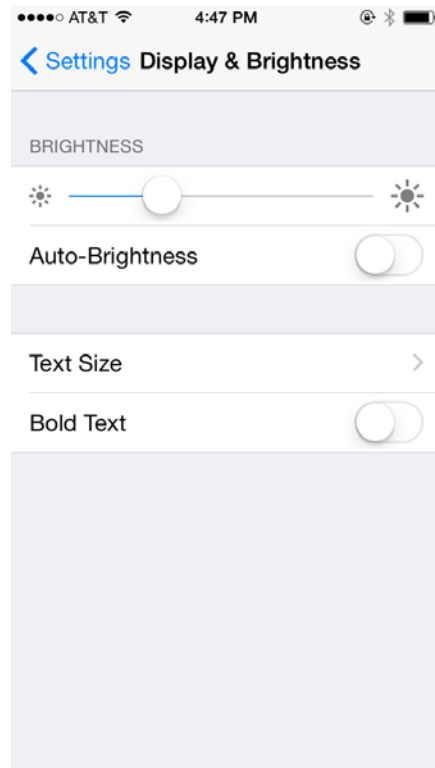
- f. Move the slider all the way to the left. What happens?
- g. Touch the **Home** button to return to the **home screen**.

Step 2: Brightness on iOS

- a. Go to **Settings > Display & Brightness**. The **Display & Brightness** screen appears.



- b. Turn off **Auto-Brightness** by moving the **Auto-Brightness** toggle to the **off** position.



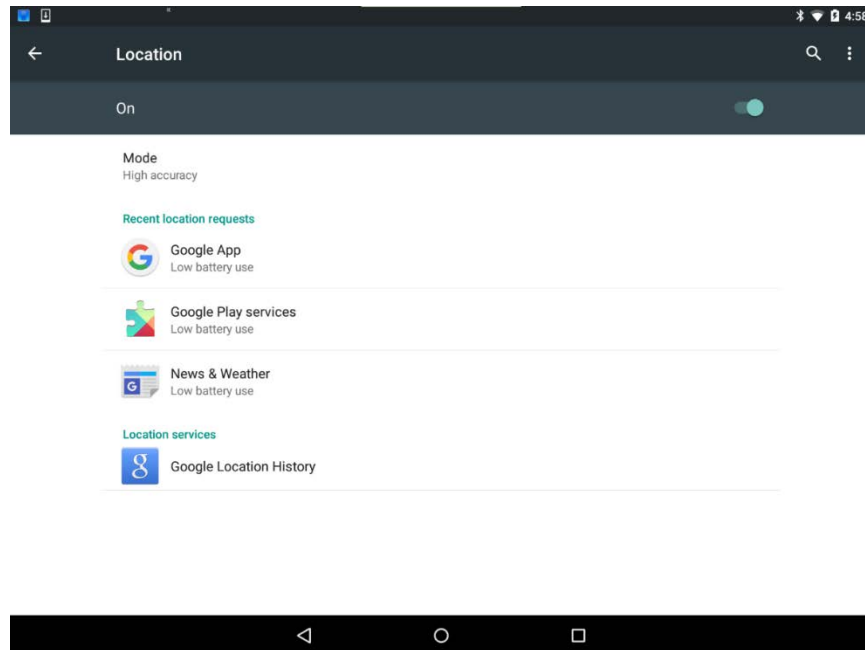
- c. Move the slider all the way to the right. What happens?
- d. Turn on Auto-Brightness. What happens?
- e. Turn off Auto-Brightness.
- f. Move the slider all the way to the left. What happens?
- g. Turn on Auto-Brightness. What happens?

Part 3: GPS

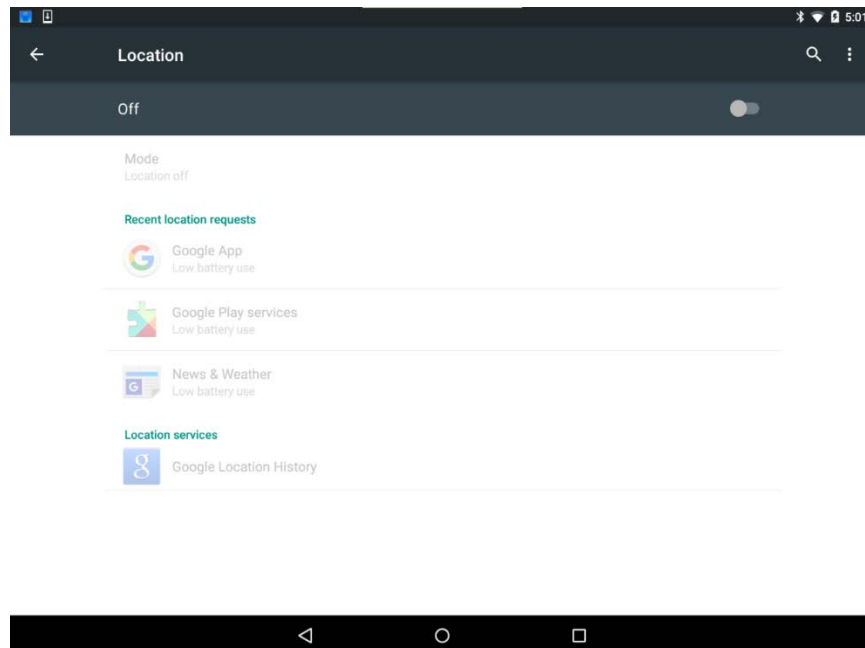
Another common feature on modern mobile devices is **GPS** or **Location Services**. By using Global Positioning System signals, mobile devices are able to learn and inform the user about the current location with good accuracy.

Step 1: GPS on Android

- a. Go to **All apps > Settings > Location** (under **Personal**). The **Location** screen appears.

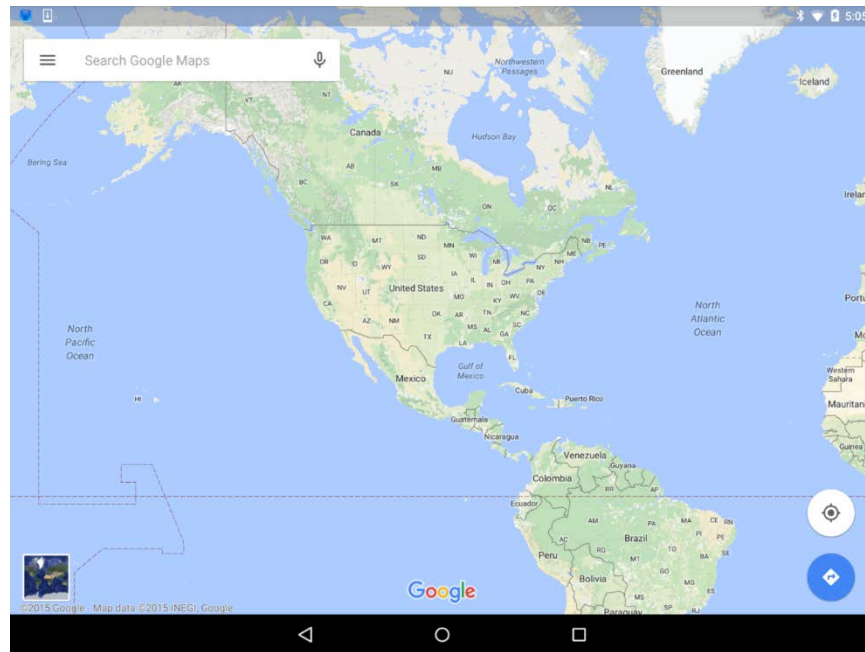


- b. Turn off Location by moving its toggle to **off**.



- c. Touch the **Home** button.

- d. Open the **Maps** app by going to **All apps > Maps**.



How is the device able to determine the location?

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

- e. Allow Android to turn on Location by touching **YES**. Your device should now have an accurate representation for your current location.
- f. Touch the **Home** button.

Step 2: GPS on iOS

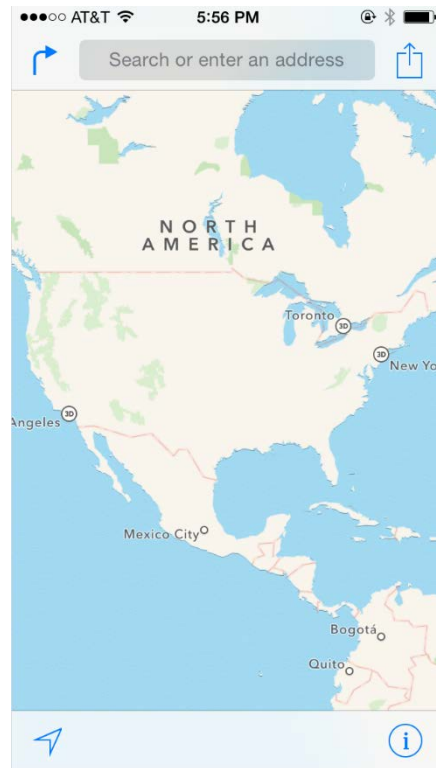
- a. Go to **Settings > Privacy > Location Services**. The **Location Services** screen appears.



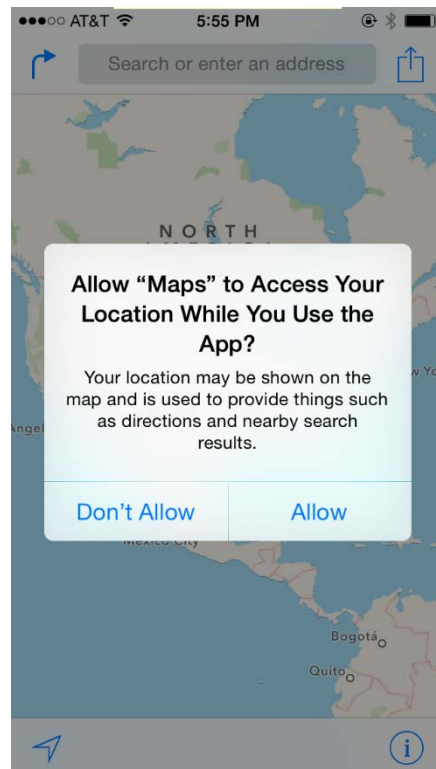
iOS allows the user to decide what apps have access to the GPS. What apps are using Location Services on your device?

- b. Turn **Location Services** off. A warning message may appear stating that the Location Services will be disabled.
- c. Press the **Home** button.

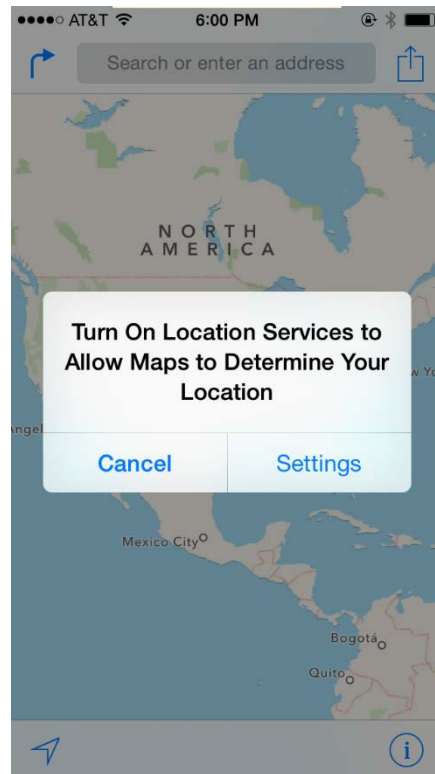
- d. Touch the **Maps** app icon to open **Apple Maps**.



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



- e. Touch the **Current Location** icon.



What happens?

- f. Touch **Settings** in the warning box to open the Location Services setting screen. Alternatively, press the **Home** button and go to **Settings > Privacy > Location Services**.
- g. Turn Location Services on.
- h. Touch the **Home** button.
- i. Touch the **Maps** app icon.
- j. Touch the **Current Location** icon again. Was iOS able to locate you and the device?
- k. Click the **Home** button.