This book introduces Android 6.0, Marshmallow, for Nexus and Android One devices. Its content may differ in some details from some of the products described or the software that runs on them. All information provided here is subject to change without notice.

For best results, make sure you’re running the latest Android system update. To find your device’s version number or check for the latest system update, go to Settings > System > About phone or About tablet and look for Android version or System updates.

If you don’t have a Nexus or Android One phone or tablet, and are running Android 6.0 on another device, some details of the system as described in this book may vary.

For comprehensive online help and support, including details about Nexus hardware running the software described in this book and links to information about other Android devices, visit support.google.com/android.
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Welcome to Android

About Android 6.0, Marshmallow

Marshmallow is the latest version of Android, the operating system that powers phones, tablets, watches, TVs, cars, and more.

This book introduces the Android 6.0 software on your Nexus or Android One phone or tablet. For hardware details, visit support.google.com/android. There, you can find comprehensive information about all types of Android phones and tablets, including more details about Nexus devices and other versions of Android.

Switching to Android from an iPhone or iPad (iOS)? See Switch to Android for useful tips on moving your apps and more and onto your Android device.

What’s new in 6.0

Marshmallow includes new features and updates to make your device work better:

- Search for anything in your photos & use free, unlimited photo storage
- Easier ways to manage interruptions
- Ability to increase storage space on some devices with an SD card
- Now on Tap: suggestions from Google Now related to what’s on your screen (available only in some locales)
- Longer-lasting battery with Doze, App Standby, and other battery optimizations
Get started

When you first turn on your phone or tablet, you’ll see a Welcome screen. Choose the language you want and touch the arrow to continue.

**IMPORTANT:** To complete the setup process, it’s best to have a Wi-Fi connection.

Sign in to your account

When prompted, sign in with your Google Account or create one. Signing in lets you immediately access everything associated with your Google Account, like Gmail and Calendar.

**TIP:** If you have another Android device, Tap & Go lets you quickly set up a new device just by holding the two devices back to back and slowly sliding one up and down against the other. Google Accounts and apps that were already backed up will automatically be copied over to the new device.

An email address used for any of the following counts as a Google Account:

- Gmail
- YouTube
- Google Play
- Google Apps
- AdWords
- Any other Google product
When you sign in, you can easily get all the apps you’ve purchased on Google Play onto your new device. All the email, contacts, calendar events, and other data associated with that account are automatically synced with your device.

For example, if you change a friend’s phone number on your phone, that change also appears on your tablet and on any computers where you’re signed in to your Google Account.

**IMPORTANT:** Make sure you remember the password you use to sign into your device or else you won’t be able to access it. Even if you do a factory reset, you will be required to enter the password you used to sign into this device.

Have multiple Google Accounts? You can add other accounts later from **Settings > Personal > Accounts**. You can also add guest users in **Settings > Device > Users**.

**Send a text message (SMS)**

To send an SMS from most Nexus phones:

1. Touch **Messenger 📭** on your Home screen.
2. Touch **+** to create a new message.
3. At the top of the screen, enter a phone number or a contact name, type your message, then touch **▶**.

If the Messenger app isn’t already on your device, you can get it on **Google Play**. You can also use the default SMS app that comes on the phone, which is Hangouts on most Nexus phones.

To change your default messaging app, open the app you want to use for messaging and change your preferences in the Settings for that app.

For more details, visit **Send or respond to a message**.
Make a phone call

Using a Nexus phone, you can place calls from the Phone app, the Contacts app, or other apps or widgets that display contact information. Wherever you see a phone number, you can usually touch it to dial.

To place a call to one of your contacts:

1. Touch Phone on a Home or All Apps screen.
2. To choose someone to call, scroll or search. If the keypad is in the way, touch the Back button to lower it.
3. To place a call, touch the contact’s name.

To view recent calls, touch the Recents tab. To use the keypad, touch the keypad button.

**TIP:** Caller ID by Google identifies inbound and outbound numbers, even for callers that you haven’t saved in the Contacts app.

For more details, visit [Use your phone](#).

To send or receive a video call, you can use the Hangouts app. To open it, touch Hangouts on a Home or All Apps screen. For more details, see [Use Hangouts](#).

Send an email

Use the Gmail app to read and write email from your Gmail account or other email addresses.

1. Touch Gmail on a Home or All Apps screen.
2. If you already signed into a Gmail account during setup, your email
will be synced to your device. Otherwise, add your email address now.

For more details, see Use Gmail.

**Take a photo**

To take a photo:

1. Open Camera 📷.
2. Frame your picture.
3. Touch the capture icon below the image area to take the picture.

To see the photo you just took, swipe from right to left.

For more details, visit Use Camera.

**Quick Settings**

Use Quick Settings to easily change frequently used settings, like turning on Wi-Fi. To open Quick Settings, swipe down from the top of the screen with two fingers. To change a setting, just touch the icon:

- **Display brightness**: Slide ⬇️ to lower or increase the brightness of your screen.
- **Wi-Fi network**: Turn Wi-Fi 📡 on or off or open the Wi-Fi settings menu.
- **Bluetooth settings**: Turn Bluetooth 📈 on or off or open the Bluetooth settings menu.
- **Do not disturb**: Turn Do Not Disturb ⏰ on or off or open the corresponding settings. Do Not Disturb silences your device so it doesn’t make sound or vibrate when you don’t want it to.
- **Cellular data**: Touch ⌁ to see cellular data usage and to turn it on or off.
- **Airplane mode**: Turn airplane mode ✈️ on or off. Airplane mode means your phone won’t connect to Wi-Fi or a cell signal, even if one is available.
• **Auto-rotate**: Lock your device’s orientation in portrait or landscape mode.

• **Flashlight**: Turn the flashlight on or off.

On a Nexus 5, Quick Settings look like this:

Open the main Settings menu by touching **Settings** at the top right.
Your apps

To see all your apps, touch ☰ in the Favorites tray on any Home screen.

This is where you can see all your apps, including those that come with your phone or tablet and those you downloaded on Google Play. You can move app icons to any of your Home screens.

The apps you’ve used most recently appear in the first row.

From All Apps, you can:

Explore apps. Swipe up and down (on a phone) or left and right (on a tablet) from the All Apps screen

* Open an app. Touch its icon.
* Search apps. Enter the name of the app you’re looking for in the Search apps... bar.
* Place an app icon on a Home screen. Touch & hold the app icon, slide your finger, and lift your finger to drop the icon into your desired Home screen.
* Get more apps. Touch Google Play in the list of app icons.

To view information about an app from an All Apps screen, touch & hold it, slide your finger toward the top of the screen, and drop the app over App Info.

TIP: Some apps can harm your data or your device. However, you don’t need to install or purchase anti-virus software for Nexus devices. Google continually checks your apps to identify and warn you about harmful apps.

For more details, see Protect against harmful apps.
Your Home screens

After you finish setting up your device, the main Home screen appears for the first time. Here, you can add app icons and widgets (an “at-a-glance” view of an app’s most important information) to your Home screens.

- To move between Home screens, swipe left or right.
- To see notifications, swipe down from the top of the screen with one finger.
- To open Quick Settings—frequently used settings—swipe down from the top of the screen twice with one finger or once with two fingers. See Quick Settings.
- To open Settings, swipe down from the top of any screen with two fingers or swipe twice with one finger, then touch the Settings icon at the top right.
- From the Home screen, touch Google at the top of the screen, or say “Ok Google” to search, send messages, ask for directions, or give other instructions.

Status bar

The status bar is at the very top of the screen. On the right, you can see the Wi-Fi and mobile signal strength, how much battery power is left, and the time. On the left, you can see which apps have sent you notifications. See Sound and notification.

Navigation basics

At the bottom of your device’s screen, you’ll find a navigation bar with these three buttons:

Back
Opens the previous screen you were working in, even if it was in a different app. Once you back up to the Home screen, you can’t go back any further.
Home
Returns to the Home screen. To get suggestions based on the screen you’re currently viewing, touch & hold this button. For more information, see Now on Tap.

Overview
Opens a list of thumbnail images of screens you’ve worked with recently. To open one, touch it. To remove a screen from the list, swipe it left or right or touch the X.

Some apps hide these buttons temporarily, or fade them to small dots in the same position. To bring them back, touch the dots, touch the screen in the middle, or swipe up from the bottom.

Many screens in apps and Settings include a menu icon at the top right of the screen. Touch it to explore additional options, including Help & feedback.

Manage battery life

The status bar shows how much battery you have left, but you can also see the exact percentage and approximate time of battery life remaining. Swipe down from the top of the screen, touch the status bar, then touch Battery.

Your device’s battery is built to get you through your day. When you’re running low, Android’s battery saver conserves your battery power so you can still make calls and send SMS messages. To turn Battery saver on or set it up to turn on automatically, go to Settings > Device > Battery > menu > > Battery saver.

Android Marshmallow includes several other automatic battery optimizations that are usually in effect. These include:
Doze reduces battery usage when your device is not in use, not charging, and not moving.

App Standby lets Android reduce battery-draining activities of apps that you haven’t used for a long period of time (when your device isn’t charging).

Doze and App Standby do not have separate settings. They are two of several battery optimizations that are in effect by default in most situations. However, you can stop all battery optimizations for an individual app, for example to ensure that it’s always functioning at peak performance, even when you’re not using it.

For more information, visit Manage battery life.

Help & feedback

In most Google apps, you can get to Help & feedback from the main menu ≡. Other apps may include a menu ☰ icon that includes Help & feedback.

This book introduces a few of the key features and apps that come with Android 6.0. For more details about Android software and apps, Nexus devices available on Google Play, and all forms of support, visit support.google.com/nexus.

Google also welcomes feedback from you about your Nexus device. It’s easy to send feedback. Just go to Settings ☰ > System > About phone (or About tablet) > Send feedback about this device.
Personalize your device

Customize your Home screens

Make your Home screen feel like home. You can change your wallpaper, add apps or widgets, or add additional Home screens to the right.

To change your wallpaper:

1. Touch & hold the background, then touch Wallpapers 🖼.
2. Swipe right to left to choose a wallpaper image. Or choose an image from your Photos, Downloads, or Drive.

To add another Home screen, swipe to the rightmost screen and drag an app or widget to the right edge. (The screen to the left of the main Home screen is reserved for Google Now.)

To add an app to a Home screen:

1. Go to the Home screen where you want to place the app.
2. Touch All Apps 📌.
3. Swipe down (on a phone) or from left to right (on an Android One and a tablet) to find the app you want.
4. Touch & hold the app until the Home screen appears, slide it into place, and lift your finger.

A widget provides a quick view or way to access information about an app on your Home screen, like a larger size clock or a view of books, music, or movies in your Google Play library. To add a widget:

1. Touch & hold the background, then touch Widgets 🌟.
2. Swipe down to explore the widgets available.
To move an app or widget to another position:

1. Touch & hold the icon.
2. Slide your finger to the new position.
   - To move between Home screens, slide toward the edge of the screen.
   - To bump another icon out of the way, slide your finger slowly into it.
3. Lift your finger.

To remove an app icon from the Home screen without removing it permanently from your device, touch & hold it, slide your finger toward the top of the screen, and drop the app over Remove × in the top left.

To uninstall an app permanently from your device, touch & hold it, slide your finger toward the top of the screen, and drop the app over the Uninstall icon  at the top right. (This is not applicable for all apps.)

At the bottom of every Home screen you’ll find the Favorites tray: another quick way to get to your apps.

To drag an app in or out of the Favorites tray or anywhere else on a Home screen, touch & hold it, then move it with your finger to where you want it.

At the top of All Apps you’ll see App Suggestions: recommendations for apps you might want to launch. To drag an app from App Suggestions onto your Home screen, touch & hold it, then move it with your finger to where you want it.
Manage your settings

Settings controls the core Android settings for networks, hardware, location, security, language, accounts, and more.

The fastest way to adjust system settings that you access frequently, such as Wi-Fi or brightness, is through Quick Settings. See Quick Settings for more information.

You can control many other settings for your device and account by swiping down from the top of the screen twice and touching 🌙. These are the main types of device or account settings available. Click the links to see related help articles.

- **Wireless & networks**: Wi-Fi, Bluetooth, data usage, and related settings.
- **Device**: Sound, battery, storage, sleep, and other display settings.
- **Location**
- **Security**: Passwords and certificates, screen lock, and app installation sources.
- **Accounts**
- **Google**: Adjust preferences for your Google Accounts and services, including sign-in and data management
- **Language & input**
- **Backup & reset** options
- **System**: Date, time, accessibility, and device information.

Most apps also include their own settings, typically available from the menu ☑️ on the upper left side of the app, or from menu ; > Settings.

Display

To change the display settings on your device:

1. Go to **Settings 🌙 > Device > Display**.
2. Choose from the following settings. Some of these settings may vary by device and version of Android. All can affect battery life. See Manage battery life for more information.
• **Brightness level**: Move the slider 🌞 to adjust the brightness level on your device.

• **Adaptive brightness**: Turn on adaptive brightness to automatically optimize the brightness level on your device based on the available light around you. Adaptive brightness is on by default. You can adjust the brightness when needed.

• **Sleep**: Change how long it takes for your device’s screen to go black when you’re not using it. Learn more about Sleep Settings.

• **Daydream**: Set up screensavers that display photos, colorful backgrounds, and more when your device is charging or docked. Learn more about using Daydream.

• **Ambient display** (available only on newer Nexus devices): Turn on ambient display if you want your phone to wake up when you pick it up or when a notification arrives.

### Sound and notification

To change the sound and notification settings on your device, go to **Settings 🛠 > Device > Sound & notification 🎧**.

Notifications alert you to the arrival of new messages, calendar events, and alarms, as well as ongoing events, like downloads:

• **Do not disturb.** These settings allow you to control which notifications come through at certain times of day or on different days of the week. You can also silence your device so that it doesn’t make a sound or vibrate when you don’t want it to. For example, you can only get notified of calls and messages from close contacts or automatically silence notifications at night or during events. For more information, visit [Set your notifications](#).

• **When device is locked.** Manage whether notifications can be seen at all when your phone is locked, or whether sensitive content in a notification can be seen. Sensitive content includes the details of a calendar event, who sent you an email, or the title of a song you downloaded. For more information, visit [Manage notification settings](#).
- **App notifications.** Modify the notification settings individually for apps such as Gmail. The setting under **When device is locked** will always take precedence over the setting for an individual app.
- **Notification access.** See which apps can access your notifications.

When a notification arrives, its icon appears at the top of the screen. Icons for pending notifications appear on the left, and system icons showing the Wi-Fi signal, mobile carrier signal, or battery strength are on the right:

![Notification icons](image)

To see the notifications that correspond to the icons on the left, swipe down with one finger.

**TIP:** Wi-Fi and mobile signal strength are indicated at the top of the screen by the white area in the corresponding icons. To see whether the selected Wi-Fi network has a full Internet connection, open Quick Settings by swiping down from the top of the screen.

In Quick Settings only, white areas in the Wi-Fi or mobile signal indicators indicate the signal strength of a normal Internet connection.
Certain notifications can be expanded to show more information, such as email previews or calendar events. The one at the top is expanded when possible. To expand a notification, position one finger inside it and swipe down slowly.

To open the related app, touch the notification. Some notifications also allow you to take specific actions by touching icons within the notification. For example, Calendar notifications allow you to Snooze (remind you later) or send email to other guests.

When you’re finished with a notification, swipe it away. To dismiss all notifications, touch Dismiss at the very bottom of the notifications list.
Pin your screen

You can enable your device to only show a certain app’s screen using screen pinning. This feature can come in handy if you want to play a game without accidentally minimizing the app if you touch the Home button. Some apps may ask if you want to use screen pinning.

When a screen is unpinned, you can choose to return to the lock screen.

To pin a screen:

1. Go to Settings > Personal > Security > Screen pinning and turn screen pinning on.
2. Open the app you want to pin.
3. Touch Overview on your device. Swipe up the first screen on the bottom to bring it into view.
4. Touch the pin . Select an option to return to the lock screen after a screen is unpinned.
5. To exit the pinned screen, touch & hold and at the same time.

Google Now

Google Now is about getting you just the right information at just the right time. It tells you today’s weather before you start your day, how much traffic to expect before you leave for work, and even your favorite team’s score while they’re playing.
For example, here’s a Google Now card that appears when you’re about to start your commute:

After you start using Google Now, you don’t need to do anything else. You can fine-tune some settings, but Google Now doesn’t need any elaborate setup.

**How it works**

To know when to show information you’ll find useful, Google Now uses contextual data from your device and from other Google products, plus data from third-party products that you allow Google Now to access. For example, if you have an appointment in Google Calendar that includes
an address, Google Now can check traffic and suggest when you should leave.

When you decide to use Google Now, you can also turn on Location History. Location History allows Google to store a history of your location data from all devices on which you’re logged into your Google Account. You can control this global setting and the setting for each device from Settings > Personal > Location > Google Location History.

To manage your Now cards:
- Touch & hold any blank area on a Home screen, then touch Settings > Now cards.

To open Google Now, swipe right from the first Home screen or touch & hold the Home button from any screen. Updates appear in the form of Google Now cards. When you don’t need a card anymore, swipe it from left to right. Swiping from right to left returns you to the main Home screen.

To learn more about Google Now, visit How Now cards work.

What you can ask Google to do for you

When you use Google Now, you can search, get directions, and create reminders just by talking to your device. For example, say “Ok Google, do I need an umbrella tomorrow?” to see if there’s rain in the weather forecast.

To see other examples of what you can say, visit “Ok Google” and voice search. You can say most of these examples in English, French, German, Italian, Japanese, Korean, Russian, Spanish, and Brazilian Portuguese, but some examples aren’t available in all of these languages.

If you want to say “Ok Google” in languages other than English, you also need to change the main language on your device. Visit Change your language on Google.
Turn “Ok Google” on or off

You can start a search or action by saying “Ok Google.” To turn this feature off or on, open Google Now or the Google app and touch menu > Settings > Voice > “Ok Google” detection.

Now on Tap

In Android 6.0, Google Now can also provide you with relevant suggestions based on the content currently on your screen. This feature is called Now on Tap. Just tap and hold the Home button, and Google Now will show related cards that might be helpful.

For example, if a friend emails you about going to a new restaurant, you can tap and hold to quickly see reviews, make a reservation, or navigate to the restaurant in the Now card that appears.
Meeting up tomorrow

Lily Redmond to me

4:26 PM

Super excited that you were able to extend your trip to NY through the weekend. Let's meet tomorrow at the Central Park Zoo at 11am so

Central Park Zoo

4.3 ⭐⭐⭐⭐⭐  (327) · 4.6 mi

Create calendar event

11:00 AM · Central Park Zoo
3

Use the keyboard

TIP: To select a keyboard language other than English, go to Settings 🌋 > Personal > Language & input. For more details, visit Keyboard help.

Enter & edit text

Use the onscreen keyboard to enter text. Here’s what it looks like on a Nexus phone:

When is the Billy Joel **con**
Keyboards on tablets work in a similar way. To make the keyboard go away, touch the Back button below it.

Some apps open the keyboard automatically. In others, you first need to touch where you want to type.

**Basic editing**

**Change where you want to type**

- Touch the cursor, then touch and drag the tab that appears below it to the new position.

**Select text**

- Touch & hold or double-tap within the text.
- The nearest word highlights, with a tab at each end of the selection. Drag the tabs to change the selection.

**Delete text**

- Touch the Delete key to delete the characters before the cursor or selected text.

**Type capital letters**

- To switch to capital letters for one letter, touch the Shift key once.
- You can also touch & hold the Shift key while you type or you can touch the Shift key and slide to another key.
- When you release the key, the lowercase letters reappear.

**Turn caps lock on**

- Double-tap or touch & hold the Shift key so that it changes to . Touch the Shift key again to return to lowercase.

**Change word capitalization**

- If you want to quickly change the capitalization of a word you’ve already typed, select it and touch the Shift key .
• You’ll have the option to capitalize the word or change the word to be in all capital letters.

Type a symbol or character
• To switch to symbol keys for one word, touch the symbol key once.
• You can also touch & hold the symbol key while you type or you can touch the symbol key and slide to another key. When you release the key, the letter keys will reappear.

View more symbols and characters
• Touch & hold symbols or characters to get accented characters or additional symbols.

Cut, copy, paste
• Select the text you want to cut or copy. Then touch Cut or Copy. Once the text is copied, touch where you want to paste the text and choose Paste. If you want to replace other text with the copied text, highlight the text, then touch Paste. Icons for Cut, Copy, and Paste may appear instead on some devices.

I want to go to Morocco.

Emoji
Use Google Keyboard to choose from a variety of small, colorful images used to express emotion (known as emoji) to add some fun to your
messages.

Depending on your app, you may need to touch & hold the Return key (or sometimes the Next key, the right-pointing arrow that appears instead of the Return key) and then slide your finger to the happy face 😊 to display emoji. On a tablet, just touch the emoji symbol at the lower right.

You’ll see a panel like this. To move between categories, swipe left or right or touch the symbols in the top row. To type an emoji, touch it:

![Emoji panel](image)

**Use next-word suggestions**

1. Touch the location where you want to input text.
2. Start typing out a word. When the word you want is displayed in a list above the keyboard, touch it.
3. Continue to touch words unless the one you want doesn’t appear. If so, type it.

Android continues to suggest words as you type.

To change your keyboard and input methods, go to Settings 🗼 > Personal > Language & input.

To turn next-word suggestions on or off, go to Settings 🗼 > Personal > Language & input > Keyboard & input methods > Google Keyboard > Text correction > Next-word suggestions.
Gesture Typing

*Gesture Typing works best for English. Quality varies for other languages, and some don’t support it yet.*

To input a word using Gesture Typing:

1. Touch the location where you want to type to open the keyboard.
2. Slide your finger slowly across the letters of the word you want to input.
3. Lift your finger when the word you want is displayed in the floating preview or in the middle of the suggestion strip. To select one of the other words in the suggestion strip, touch it.

If the word you want isn’t shown while using Gesture Typing, you can type it out manually. If you gesture a word and want to change it, touch the word to see other choices in the suggestion strip.

**TIP:** If there are letters you want to emphasize, like repeated letters, such as the “e” in sleep, pause over the “e” slightly longer before moving on to the next letter.

**Use Gesture Typing without the space bar**

When you use Gesture Typing, there’s no need to use the space bar — just continue to slide your finger across the letters you want to input, then lift your finger to start the next word.

To change Gesture Typing settings, go to Settings > Personal > Language & input > Keyboard & input methods > Google Keyboard > Gesture Typing.

**Keyboard dictionaries**

To manage keyboard dictionaries, go to Settings > Personal > Language & input.
Personal dictionary

Add your own words to your personal dictionary so that your device remembers them. To add a word or phrase, including an optional shortcut, go to Settings > Personal > Language & input > Personal dictionary and the language of the dictionary you want to modify, then choose Add and type in the word. When you use the optional shortcut when typing, your word or phrase appears as an option in the suggested words above the keyboard.

Type by speaking

You can speak to enter text in most places where you can enter text with the onscreen keyboard.

1. Touch a text field, or a location in the text you’ve already entered in a text field.
2. Touch the Microphone key on the onscreen keyboard.
3. When you see the microphone image, speak what you want to type.

In some languages, you can also enter punctuation by speaking it, like “comma,” “period,” “question mark,” “exclamation mark,” or “exclamation point”. Supported languages include English, French, German, Italian, Russian, and Spanish.

To improve processing of your voice input, Google may record a few seconds of background noise in temporary memory at any time. This recording only remains on the device temporarily and isn’t sent to Google.

To change your speech settings, go to Settings > Personal > Language & input.
Control access

Manage accounts on your device

You can add accounts so that information associated with those accounts automatically syncs with your phone or tablet. You’ll need to set up an account on your device if you want to receive email or get apps on Google Play.

You can also add multiple users for your device, if, for example, several people share a tablet. Adding users is different from adding accounts. Each user has separate settings and can’t access the accounts of other users, whereas a single user can have multiple accounts and switch between them easily.

Add an account

1. Go to Settings 🗼 > Personal > Accounts.
2. Touch Add account.
3. Touch the type of account you want to add. You may be able to choose from options like Google, Personal (IMAP), or Personal (POP3). If you’re not sure whether to choose IMAP or POP3, try IMAP first. Learn more about the differences between IMAP and POP3.
   To add your Google Account, touch Google. When you sign in with a Google Account, all the email, contacts, calendar events, and other data associated with that account are automatically synced with your device.
4. Follow the on-screen instructions to add the account.

To change the settings of any of the accounts you added:
1. Go to Settings > Personal > Accounts.
2. Select your account. If you’re using a Google account, touch Google and then your account.

**Remove an account**

When you remove an account that you’ve added to your device, everything associated with that account, including email, contacts, and settings is also deleted.

To remove an account from your device:

1. Determine whether the account you want to remove is the account you used to set up your device.
   - If it’s not, go to step 2 and follow the instructions.
   - If it is, reset your device to its factory settings instead of following the steps below. This erases all of the data from your device. Learn how to do a factory data reset on your Nexus device or Android One device.
2. Go to Settings > Personal > Accounts.
3. Touch the name of the account you want to remove. If you’re using a Google account, touch Google and then your account.
   - When you sign out of your Google Account, all the email, contacts, Calendar events, and other data associated with that account will no longer automatically sync with your device.
4. Touch menu in the top right corner of the screen.
5. Touch Remove account.

**Share your device with other users**

You can easily share your device with family and friends by creating a separate user space for each person. Each user can set up their own
custom Home screens, accounts, apps, settings, and more. You must be the device owner to add users.

To add a new user:

1. Go to Settings > Device > Users.
2. Touch Add user, then touch OK.
   If you’re with the new user: Touch Set up now and you’ll be taken to the lock screen. Select the new user, unlock the screen, and allow them to set up their Google Account and other details. If the new user isn’t around: Touch Not now. A New user will appear in the list. The next time you’re with the user, go back to the user list and select New user or click the user image on the lock screen.

After a user is set up, when you go to the lock screen, you’ll see a second user profile picture or avatar in the status bar. To choose a user, touch their picture and unlock the screen. Each user can set their own screen lock.

Switch users

To switch users, swipe down from the top of any screen twice to open Quick Settings. Touch the image of the current user at the top right corner of the screen, then touch the other user’s image.

Remove a user

The device’s owner can delete any user that they added:

1. Go to Settings > Device > Users.
2. Touch Settings next to the user’s name, then touch Remove user.

Other users can only delete their own user space:

1. Go to Settings > Device > Users.
2. Touch menu > Delete username from this device.
Guest user

If someone wants to temporarily use your device, but they don’t need to be set up as a regular user, they can use it as a guest. Guest users don’t have access to your mail, your apps, or any content on your phone that’s tied to your account, like photos or downloaded files. You must be the device’s owner to add a guest.

1. Go to Settings 🗿 > Device > Users.
2. Touch Guest.

When your guest is finished using your device, you can switch back to another user.

To switch to another user: Swipe down from the top of any screen, and then touch the bar at the top to open Quick Settings. To choose another user, touch the image in the top right corner of the screen, then touch the other user’s image.

Security

If a lock is set for your screen, the screen goes dark and locks when the display goes to sleep or you press the Power button.

You can set locks of different strengths using screen lock settings:

1. Go to Settings 🗿 > Personal > Security > Screen lock.
2. Touch the type of screen lock you’d like to use.

Even when your screen is locked, you can still perform certain activities.

• Quick Settings: Swipe down from the top of the screen to see Quick Settings.
• Camera: Swipe from right to left on your screen or swipe away from the camera icon in the bottom right corner to open the Camera.
• Emergency calls (phones only): Swipe up and touch the word
Emergency.

If you have a device that’s set up for more than one user, you may need to touch your image at the bottom of the screen to see your own locked screen.

For more information, visit Set screen lock.

Smart Lock

You can turn on Smart Lock to keep your device unlocked when it’s safe with you—for example, when you’re at a trusted place or when the device recognizes your face. To use this feature, go to Settings > Personal > Security > Smart Lock.

Trusted devices

You can set your device to stay unlocked while connected to a Bluetooth device—like a watch, fitness tracker, headset, or car speaker system. You can also set your phone to unlock when it touches an NFC tag.

Facial recognition

You can have your device unlock when it recognizes your face. After setting a trusted face, every time you turn on your device, it will search for your face and unlock if it recognizes you. Keep in mind that someone who looks similar to you could unlock your phone.

Note: Face matching doesn’t store any photos of you. Data used to recognize your face is only stored on your device and is not accessible by apps or backed up on Google servers.

On-body detection

You can have your device stay unlocked when you have it on you—for example, if you’re carrying it in your hand, pocket, or bag. The accelerometer built into your device will keep your device unlocked when it senses that it’s being carried. On supported devices, on-body detection
will learn a signature of the way the phone moves while you walk in order to lock the phone when it moves in a way that doesn’t resemble your natural rhythm.

*Note: On-body detection can’t tell whose body is connected to on-body detection. If you give your device to someone else while it’s unlocked, your device may stay unlocked using on-body detection.*

**Trusted places**

You can choose trusted places, like your home, to keep your phone unlocked whenever you’re there. You need to have an Internet connection and allow your phone to use your current location for your trusted places to work. The trusted places feature works best when you have a Wi-Fi connection.

**Trusted Voice**

You can have your device unlock when you do a search with “Ok Google.” You won’t have to put in your password to view search results if we’re able to recognize you using the sound of your voice. Learn how to Search with “OK Google” and have your device unlock.

For more information on how to use Smart Lock, see [Set up your device for automatic unlock](#).

**Fingerprint**

On Nexus devices with a fingerprint sensor, you can use your fingerprint to unlock your device. Instead of entering a PIN or password, you can just touch the sensor.

For more information, see [About Fingerprint](#).

**Protect against harmful apps**

Apps from Google Play are always verified by Google to protect your data.
and your device from harm. By default, your device doesn’t allow the installation of apps from sources other than Google Play.

If you choose to allow the installation of apps from other sources, you’re more likely to end up with harmful apps on your device.

The Verify Apps feature protects you by continually checking for apps that may harm your device, steal your personal information, or perform other malicious actions – no matter where they come from. Regular updates to your Android software help ensure that your device can identify and warn you about apps that are known to be dangerous. Be sure to accept such updates whenever you’re notified of them.

For more information or to change the default behavior, visit Protect against harmful apps.

### Android Device Manager

If you lose your phone or tablet, the Android Device Manager can help you find its approximate location, make it ring, lock it, or erase its data.

These options are turned on by default. To view or change them, open Settings > Personal > Google > Security.

If you lose your device, go to Android Device Manager and follow the instructions.

### Backup & reset

If you want to change the Google Account that your device backs up to, you can change that in Settings > Personal > Backup & reset.

If you need to reinstall an app, your device can automatically restore your backed up settings and data from Google Drive. You can choose this option when you first set up your device, and turn it on or off from Settings > Personal > Backup & reset > Automatic restore.
Pay with your phone

When NFC is turned on, you can use Tap & pay to pay for items just by holding your phone to the contactless terminal at checkout.

To manage which app you use for payment:

• Go to Settings ⚙️ > Device > Tap & pay > Payment default.

If you don’t have a payment app on your device, such as Android Pay, search Google Play for “payment apps.” For more information, visit Tap & pay with your device.
Share & store content on your device

Android Beam

You can instantly send or beam a web page, video, or other content from your screen to another device by bringing the devices together (typically back to back). In some apps, the Share icon also gives you the option of using Android Beam.

Before you begin: Make sure both devices are unlocked, support Near Field Communication (NFC), and have both NFC and Android Beam turned on. To check, go to Settings > Wireless & networks > More. Check the printed guide that comes with your device to identify the NFC area, or look up its hardware diagram.

1. Open a screen that contains something you’d like to share, such as a webpage, YouTube video, or a place page in Maps.
2. Move the back of your device toward the back of the other device. When the devices connect, you hear a sound, the image on your screen reduces in size, and you see the message Touch to beam.
3. Touch your screen anywhere. The other device displays the transferred content. If the necessary app isn’t installed, Google Play opens to a screen where the owner of the other device can download the app.

To turn on NFC, go to Settings > Wireless & networks > More > NFC.

To turn on Android Beam, go to Settings > Wireless & networks >
Google Cast

Google Cast is a technology that lets you cast entertainment and music from your phone or tablet right to your TV or speakers. Discover a growing number of Google Cast apps including Netflix, YouTube, Pandora, Hulu Plus, HBO GO, WatchESPN, Google Play, and more at g.co/castapps.

These devices have built-in Cast technology:

- Chromecast: Allows you to cast entertainment from your phone or tablet to your TV.
- Devices that support Cast for audio: Allow you to cast music from your phone or tablet to compatible speakers.
- Android TV devices: Allows you to cast to TVs, set-top boxes, and game consoles.

When using a Chromecast, make sure your phone or tablet is using the same Wi-Fi network as your Chromecast, and that Chromecast is selected as your TV’s source input.

To display content from your phone or tablet on your TV:

1. Open the video or music in one of the apps that support Cast.
2. Touch the Cast icon.
3. Play the content as usual to stream it to your TV.

For more information, see Cast from apps to your TV.

File storage

Android 6.0 makes it easy to store and browse through pictures, videos, and other files on your device and attach them to emails, texts, and other
kind of messages. You can also use stored images as your Home screen wallpaper.

For example, to attach an image to an email you’re composing, touch the Paper Clip  at the top right and choose to either Attach file or Insert from Drive to select stored images in your Drive folder.

From Attach file, you can view any of these sources:

- **Recent** shows you the photos or videos you’ve taken or opened most recently.
- **Drive** lets you attach any files stored in Google Drive.
- **Images** displays any photos, videos, or other images on your device.
- **Downloads** includes most files (excluding Play content) you’ve downloaded from emails or the Web.
- **Photos** lets you browse all the images and videos that are on your device or have been uploaded to your Google account.
- **Audio** allows you to attach audio files you have downloaded onto your device.

Use the Downloads app to view, reopen, or delete files you download from Gmail or other sources (excluding Google Play books, videos, magazines, and other media.)

In the Downloads app:

- Touch an item to open it.
- In your list of downloads, touch & hold an item to select it. Touch Share  and choose a sharing method from the list. Touch Trash  to delete.

Google Play streams purchases and rentals via the Internet. The purchases and rentals don’t always occupy storage space when you play them. Although you can download content in Google Play apps to access offline, Google Play content never appears in Downloads.
SD card storage

You can insert micro SD cards into most Android One phones to extend their storage capacity. This feature isn’t available on Nexus devices.

For more details, visit Install and use a micro SD card.

Dual-SIM card support

If you have an Android One phone, you can use two SIM cards: one for cellular data, and one for voice. For more details, visit Dual-SIMs.

Screenshots

To take a screenshot from Nexus devices:

1. Make sure the image you want to capture is displayed on the screen.
2. Press the Power and Volume down buttons simultaneously.

The screenshot is automatically saved in Photos, and you’ll receive a notification when it’s available. Touch the notification, or open Photos and go to menu > Device folders > Screenshots to see your saved screenshots.

TIP: To easily share your screenshot through email, text message, or other options, select your screenshot in Photos and touch Share at the bottom. Touch Edit to modify.

Printing

With Android 6.0, you can preview and print the content of certain screens (such as web pages displayed in Chrome) with a printer on the same Wi-Fi network as your Android device.

Before you can print, you need a printing service installed on your device.
To check what services are currently available, go to Settings ⚙ > System > Printing.

Open each available service to turn it on or off, check which printers are available, add new printers, and adjust the service’s settings.

To print a document, like a webpage in Chrome:

1. Touch menu ☰ > Print.
2. In the dialog that appears, adjust settings such as printer, copies, orientation, and more.
3. Touch Print 📅. For more information, visit Print from your device.
Try some apps

Play Store

The Google Play Store brings together all your favorite apps & games, movies & TV shows, books, music, and news & magazines in one place, so you can reach them from any of your devices.

To open the Play Store app, touch Play Store.

If you purchased content in the Play Store in the past, you’ll automatically have access to this content on any Android device — just make sure you’re signed in with the same account that you used to purchase the content. To check:

1. Open the Play Store app.
2. Touch menu at the top left.

From here, you can view the current account or switch to another, view your purchased apps, check your wish list, and more.

To set preferences, clear your search history, and turn on user controls, go to menu > Settings. For example, to filter apps based on maturity level or require a PIN for purchases, touch Parental controls or Require authentication for purchases.

To check for updates, go to menu > My apps.

Google Play support

For more details about Google Play, including phone and email support options, visit the Google Play Help Center.
Gmail

Use the Gmail app to read and write email from any mobile device. To open it, touch Gmail 💌 on a Home or All Apps ☰️ screen.

Gmail isn’t just about email. You can use your Gmail account to sign in to all Google apps and services, including these and many more:

- [Google Now](#), for getting the information you need at just the right time
- [Calendar](#)
- [Contacts](#), for keeping track of your contacts
- Google Drive, for working with documents

While you’re reading a message:

- Touch the icons along the top of the screen to archive ⇩, throw away 🗑️ or mark a message as unread 📬. Look under the menu ☰️ to move, change labels, mute, print, or do other actions to the email.
- Swipe left or right to read the previous or next conversation.

**TIP:** You can access your email from other accounts, like Microsoft Exchange, in Gmail by adding the account in Gmail Settings.
Camera

The Camera app lets you take regular photos, panoramic photos, videos, and immersive 360-degree photo sphere shots, including what’s above and below you.

To open Camera:

• From the the lock screen, touch Camera 📸 and swipe away from the camera icon in the bottom right corner.
• From the Home screen, touch Camera 📸.

The first time you open Camera, you may be asked if you want it to remember photo locations. This allows you to pinpoint the location of a particular photo with Google Maps.

When you open Camera, you can choose from several different camera modes. To see the modes, swipe left to right or (on the newest Nexus phones) touch the menu ☰ .

The Camera icon 📸 indicates Camera mode. To take a picture:

1. Frame your subject.
   If you want to make fine adjustments to focus, watch for the focus ring. To focus on a different part of the image, touch it. To zoom in, pinch two fingers outwards. To zoom out, pinch two fingers inwards.
2. When the focus ring brackets disappear, touch the round capture button below the image.
3. To see the image you just took, swipe from right to left. To see other recently captured photos, keep swiping from right to left. To see stored photos, touch Photos 📸 at the top right.
4. When viewing a photo, touch ✉️ to share, Edit 🖊️ to modify and 🗑️ to delete.

Keep swiping right to left to see other stored images.

On older Nexus devices, swipe left to right on the main camera screen to
view the camera modes.

On the latest Nexus devices, you can swipe from right to left to switch to Video mode, and then from left to right to switch back to Camera. To view the other modes, touch menu ➕ at the top left of the image area.

**Photo Sphere**
- To capture a 360-degree or wide angle shot, pan or tilt until the circle
in the center of the screen moves over a blue dot and records that portion of the image. Keep moving over the dots until you’re finished, then touch the check mark ✓ at the bottom of the screen.

**Panorama**

- Touch Panorama to begin taking a panoramic photo.
- Find your starting point, and touch the shutter to take the first picture in the panorama.
- To take the subsequent pictures, slowly swivel the phone in place to move the target icon over each gray dot until the dot turns blue.
- Keep hovering over the dots until all of them are blue and your image is complete. Then touch the check mark ✓ at the bottom of the screen.

**Lens Blur**

- Touch Lens Blur, then slowly raise the device following the arrow.

**Camera**

- Touch Camera to take regular pictures.

**Video**

- To start recording a video, touch the video button. Touch the square ■ to stop.

To change settings for each mode such as flash ⚡, grid ☐, timer ⌚, etc, touch the three dots at the bottom right of the framed image.
**TIP:** HDR+, available on some Nexus devices, automatically snaps a rapid burst of photos and combines them to give you the best possible single shot. To turn on HDR+, touch the … at the lower right of the shutter and select HDR+. This feature is most useful for backlit scenes or those with both very bright and very dark elements.

For more details, visit [Camera help](#).

**Photos**

The Photos app gives you instant access to all the photos on your phone or tablet and anything else synced to your Google Photos library.

You can search your photos for anything. For more details, visit [Find people, things, & places in your photos](#).

To open Photos from the:

- Camera app. Swipe from right to left.
- All Apps screen. Touch Photos.

The Photos app makes it easy to backup your photos and videos, organize them, and share. You can choose between two storage sizes to backup your photos, High quality or Original.

If you choose the **High quality** storage size, then you’ll get unlimited free storage for photos and videos that might be reduced in size or resolution. For more details, visit [Choose storage size](#).

For more details, visit [Photos help](#).
Contacts

The **Contacts** app gives you quick access to all of your stored contacts. To open it, touch the **Contacts** icon on a Home or All Apps screen.

When you first turn on your device and sign into a Google Account, existing contacts from that account are synced with your Contacts app. After that, your contacts stay in sync automatically on your different devices or a Web browser.

If you use Exchange, you can also sync that contact information with **Contacts**.

All your **Contacts** information is available from Gmail, Hangouts, and other apps. As you add contacts from different sources, they're synced automatically across all the places you need them.

When you open the **Contacts** app, you can:

- **View all contacts or favorites**. Choose from the top of the screen.
- **Add a contact**. Touch Add Contact 📞.
- **Read details**. Touch a name to see details for a contact or group.
- **Share a contact** or place a frequently used contact on the Home screen. Touch menu •.
- **Edit details**. While viewing a contact, touch Edit ✍ at the top of the screen to edit the contact’s information.
- **Change your settings**. While viewing the main list screen, touch menu • to import or export contacts, choose display options and add or edit accounts.

For more information, visit [Contacts help](#).

Hangouts

With Hangouts, you can make video calls to anyone with a Google Account. You can share photos and your location with others. On some Nexus devices, Hangouts is also your default messaging app.
For more information about using Hangouts, visit Hangouts help.

**Calendar**

Use the Calendar app to view and edit your schedule. To open it, touch Calendar on a Home or All Apps screen.

When you first set up your Android device, you have a chance to configure it to use a Google Account (such as Gmail). The first time you open the Calendar app on your phone or tablet, it will display any existing calendar events from that Google Account on the web.

As you edit events, they’re synced automatically across all the places you need them.

To change the Calendar view, touch the menu  and choose **Schedule**, **Day**, **Week**, or **Month**.

To read or edit event details, touch the event from any Calendar view.

To email everyone who is invited to an event, you have two options:

- Open the event from the Calendar app at any time and touch **Email guests**. You have a list of quick responses or you can write your own.
- When a notification of the event arrives just before the meeting starts, swipe down the notification shade. Then swipe using one finger to expand the notification if necessary, and touch **Email guests**.

For more information, visit Calendar help.

**FM Radio**

If you have an Android One phone, you can listen to or record FM radio stations with the FM Radio app . To use FM Radio:

1. Plug earphones into your device. They serve as a radio antenna.
2. Open the FM Radio app.
3. The radio will start playing the station on the screen.
You can keep listening to the radio even when you want to use another app or if your screen goes to sleep by touching the Home button. The radio will keep playing until you turn it off.

For more information, visit [Listen to and record FM radio stations](/#).
To use the accessibility options, open Settings ⚙️ > System > Accessibility.

To view detailed information about setting up these options, visit Android Accessibility. Here are some options for people with visual impairments:

**TalkBack** is a screen reader from Google that comes with your Android phone and tablet. It uses spoken feedback to describe events, such as notifications, and the results of your actions, such as opening an app. When TalkBack is on, you have to double-tap in order to select something. TalkBack settings let you control the nature of TalkBack speech, feedback, and touch exploration (Explore by touch).

**Captions**: You can turn on captions for your device and specify the language, text size, and style. For some apps, you have to turn on the captions in the app itself.

**Explore by touch** is a system feature that works with TalkBack, allowing you to touch your device’s screen and hear what’s under your finger via spoken feedback. It is helpful to people with low or no vision. In TalkBack settings, you can change the settings of Explore by touch, like managing gestures and how lists are scrolled.

**System and display** options include increasing the text size, changing the speed at which text is spoken, color inversion, color correction, and high contrast text.

You can also try magnification gestures, which allow you to zoom in and out, as well as temporarily magnify what’s under your finger. To try magnification gestures, go to Settings ⚙️ > System > Accessibility > Magnification gestures.
Android on watches, TVs, and cars

**Android Wear**

Android Wear watches help you stay present and connected by giving you useful information at a glance. Check your calendar or quickly respond to messages using your watch, even when you’ve left your phone behind. Get handy tips from Google Now automatically throughout your day, with traffic info, your flight status, or weather forecasts. Set fitness goals and get daily and weekly views of your progress. Thousands of watch faces and apps in Google Play help you customize the look and features of your watch. You can choose from a variety of watches and bands from Asus, Huawei, LG, Motorola, Samsung, Sony, and other manufacturers.

For more information, visit [android.com/wear](http://android.com/wear).

**Android TV**

Nexus Player (currently available on Google Play) and other set-top boxes and TVs coming on the market in 2015 let you watch all your Google Play movies & TV content using Android TV. The Android TV Remote Control app supports voice search and an on-screen keyboard, giving you full control of your TV from your phone or tablet. You can also browse personalized content recommendations from Google Play, YouTube, and your apps. Or use voice search to quickly find what you want: say “Back to the Future”, “Oscar nominated movies from 2014” or “Brad Pitt movies”, and let Android TV do the work.
Android Auto

Android Auto allows you to display navigation, music, contacts, and messages from your phone on the built-in screen of a compatible car. With a simplified interface, integrated steering wheel controls, and powerful new voice actions, it’s designed to minimize distraction so you can stay focused on the road. It’s easy to get where you’re going with free voice-guided navigation via Google Maps, live traffic information, lane guidance, and more.

For more information, visit android.com/auto.