UNIVERSITI PUTRA MALAYSIA
BERILMU BERBAKTI

INSTITUT PENYELIDIKAN PENUAAN MALAYSIA
(MYAGEING™)
MALAYSIAN RESEARCH INSTITUTE ON AGEING

# DIGITAL LITERACY FOR OLDER PERSONS

## MODULE 1
## Mobile Devices

By
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Siti Anom Ahmad
Foong Hui Foh
Siti Farra Zillah Abdullah
Mohamad Fazdillah Bagat

**Malaysian Research Institute on Ageing (MyAgeing™),** Universiti Putra Malaysia

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# PREFACE

## DIGITAL LITERACY FOR OLDER PERSONS

Malaysian Research Institute on Ageing (MyAgeing™)
Universiti Putra Malaysia

Older persons in Malaysia today were not born during the digital era. They are frequently marginalised when it comes to employing information and communications technology (ICT). Because most services have gone online, ICT use is deemed critical, especially during the COVID-19 pandemic. As a result of their lack of digital literacy, older persons who are frequently "offline" are unable to meet their needs. Yet, despite being the least digitally connected population, they are among the most vulnerable to the rising threat of cybercrime.

The Malaysian Research Institute on Ageing (MyAgeing™), Universiti Putra Malaysia started on the Digital Literacy for Older Persons program in response to 2021 theme of the United Nations International Day of Older Persons – Digital Equity for All Ages. The program aims to promote digital literacy and increase older people's digital literacy, self-efficacy, and self-confidence in using mobile devices and the internet. Ultimately, this initiative could reduce the digital divide between young and old people.

Five educational modules were developed to help older persons self-learn how to use smartphones and apps. The following digital literacy topics are covered in the modules:

Module 1: Mobile devices
Module 2: Mobile navigation and tracking
Module 3: Communication and messaging
Module 4: Online shopping, e-wallet, and self-checkout machine
Module 5: Trusted content online services

## Who Should Enroll

The Digital Literacy Program is available to all Malaysians over the age of 60 years. Sign up with a valid email address to participate.

## Certificate

To obtain a Certificate, participants are required to complete the assessment process which consist of pre- and post-evaluation. This Certificate will be issued by MyAgeing™, UPM.

## Join Us Now

Now, more than ever, we must ensure that no one is disconnected. It is envisaged that this program will assist older persons in effectively using digital technologies, not only for knowledge and information, but also to stay in touch with family members and friends.

We sincerely hope you find this useful!

MODULE 1

# Mobile Devices


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# Synopsis

In this module, we will explore the usage of mobile devices among the elderly. We will focus on the basic features of a smartphone and tablet; discuss the role of mobile devices in daily lives.

# Learning Outcomes

By the end of the module,

- Participants should understand what a mobile device is
- Participants should know the basic features of a smartphone and tablet
- Participants should have a positive attitude towards the use of smartphone

# ChecBric

Based on your prior knowledge and the knowledge acquired after completion of this module, kindly complete the survey below using the following scale:
Scale:

0 - No knowledge
1 - Limited knowledge
2 - Knowledgeable and able to clarify well
3 - Competent and can put to practice fully

| Learning Achievement | Before | After |
|---|---|---|
| I understand what a mobile device is. | | |
| I know the basic features of a smartphone and tablet. | | |
| I have a positive attitude towards using smartphone. | | |

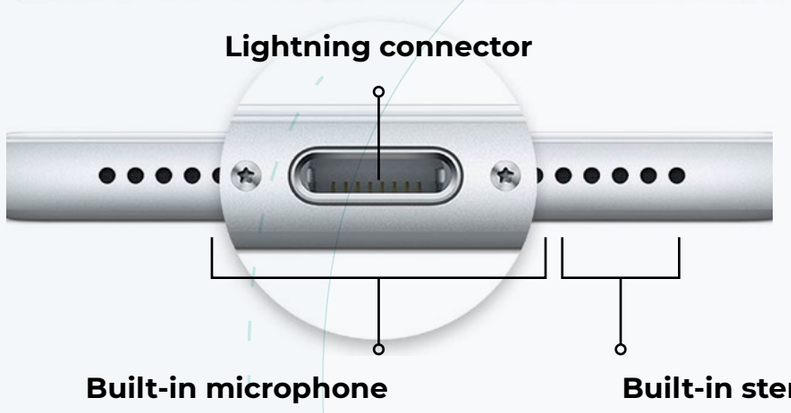
# 1.0 Introduction to Mobile Devices & their Key Features

Mobile device is a general term for any type of handheld computer. These devices are intended to be incredibly handy and compact, often fit within your hand. Some mobile devices—like smartphones, tablets and phablets (i.e. smartphone + tablet) — are powerful enough to do many of similar things you can do with a personal computer or laptop. They are much lighter than laptops and so you can bring them and use them almost anywhere.

# Smartphone

Smartphone is a more powerful version of a traditional mobile phone. Integrates mobile phone capabilities (i.e. phone calls, voicemail, text messaging), with more common features of a handheld computer or PDA. Allow users to connect to the Internet over Wi-Fi or cellular network (which requires purchasing a monthly data plan). This means a smartphone user can do the same things one would normally do on a computer, such as checking email, browsing the web, shopping online or installing programs and applications.

Smartphones may range from a screen size of around 5 inches all the way up to around 7 inches. This measurement is the diagonal length of the screen. Larger smartphones work best for seniors, especially those with poor eyesight, as these have larger font sizes and the onscreen buttons tend to be bigger.



# Tablet computer

Like laptops, tablets are designed to be light and easily portable. Tablets provide different computing experience through its special features of touch screen-based computers. Touch screen implies tablets are NOT controlled by a keyboard and touchpad, but by using your finger as a mouse pointer touching the screen. You control it by touching the images on the screen.

The touch screen interface of these devices tends to be relatively easy for seniors to learn and many of them tend to understand what to do very easily. The iPad is one of the more well-known examples of these, and is a product made by the Apple Company. Samsung has created a Tablet called the Tab 7, and this is the Tablet used in designing this curriculum.

Tablets may range from a screen size of around 5 inches all the way up to around 10 inches, with screen sizes from 7 to 10 inches being the most common. This measurement is the diagonal length of the screen. Larger tablets work best for seniors, especially those with poor eyesight, as these have larger font sizes and the on-screen buttons tend to be bigger.

# Apple iOS vs. Android

Mobile devices are a class of computer; thus, they have their own operating system and can run a large number of applications (ie. apps). Mobile devices will run either an Apple iOS or an Android operating system. Most simply, the operating system is the base software that controls the tablet. The operating system is the "base" software that runs the smartphone and tablet and controls how it functions. Different operating systems look and work a little differently, although there is also a lot in common between tablet operating systems.

| Category | Apple iOS | Android |
|---|---|---|
| Affordability (price) | High-end range | Wide range<br>(from low-end to high-end) |
| Apps[1] | 1. Total = 1.8 million<br>2. Lower percentage of free apps<br>3. No sideloading apps | 1. Total = 2.7million<br>2. Higher percentage of free apps<br>3. Higher number of sideloading apps |
| Battery life & charging | 1. Typically longer battery lifetime<br>2. Newer model supports fast charging | 1. Typically longer battery lifetime<br>2. Newer model supports fast charging |
| Calls and Messaging | Good | Good |
| Customizability | Lower than Android | Higher than iOS |
| Ease of use | Simpler and easier | |
| Photo Backup | iCloud (5GB free) | Google Photos (15GB free) |
| Security | More secure | |
| Apps | AppStore | Google Play store |
| Personal Assistant | Siri | Google Assistant |

Reference:
[1]https://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/
*as off Jan 31, 2021*

# 1.1 Selecting your Mobile Devices

## 1.1.1 Tablet computer

### Apple's Tablet

### Android's Tablet

and many more...

# 1.1.2 Smartphone

## Apple's smartphone

## Android's smartphone

## and many more...

# Internet connection: Cellular data or Wi-Fi Only

**Cellular data allows:**

1. Your smartphone or tablet connects to the Internet via a signal provided by cellular or other wireless carriers, with a monthly subscription.
2. You need to have a data plan that includes cellular data and be in the range of a cell phone tower to access the Internet.
3. It may be an unlimited-use plan or based on the actual amount of data transferred.

**Wi-Fi allows:**

1. Your smartphone or tablet to connect to the Internet via a router, with no monthly subscription.
2. You need to be in the range of a router and connect to the network in order to access the Internet.

# Cellular Provider in Malaysia

1. You need a cellular provider that has service where you live/work.
2. Check the provider's coverage map to see if service is available and how good it is.

# Locked vs. Unlocked Mobile Devices

1. Most cellphones sold by cellular providers are ‘locked’ to their own cellular service. If you buy a smartphone from Celcom, it will only work with Celcom only.
2. An unlocked cell phone will work with any cellular provider, generally sold by non-cellular providers

# Mobile Devices for Older Adults: Features

1. A simple interface
2. Large screen
3. Something easy to carry about
4. Enhanced volume and hearing-aid compatible phones
5. Voice to text
6. Medical support:
   a. Medication reminders
   b. Quick and easy access to medical professionals
   c. Medical alert systems
7. Emergency & Tracking
   a. Pre-programmed buttons for emergency or frequently used numbers

   b. Low-battery alerts that can text caregivers or friends
   c. GPS tracking
8. Icon size
9. Voice over
10. Fingerprint Recognition
11. Long-lasting batteries

# Selecting Your Mobile Devices

1. Price
2. CPU/speed
3. Screen size/resolution
4. Bluetooth
5. RAM/Memory size
6. Battery life
7. Weight

# 1.2 What are the things you can do with Mobile Devices?

## 1.2.1 Potential benefits

- **Communication**
  To help people to stay connected with family and friends. You can contact them easily by calling or sending messages.

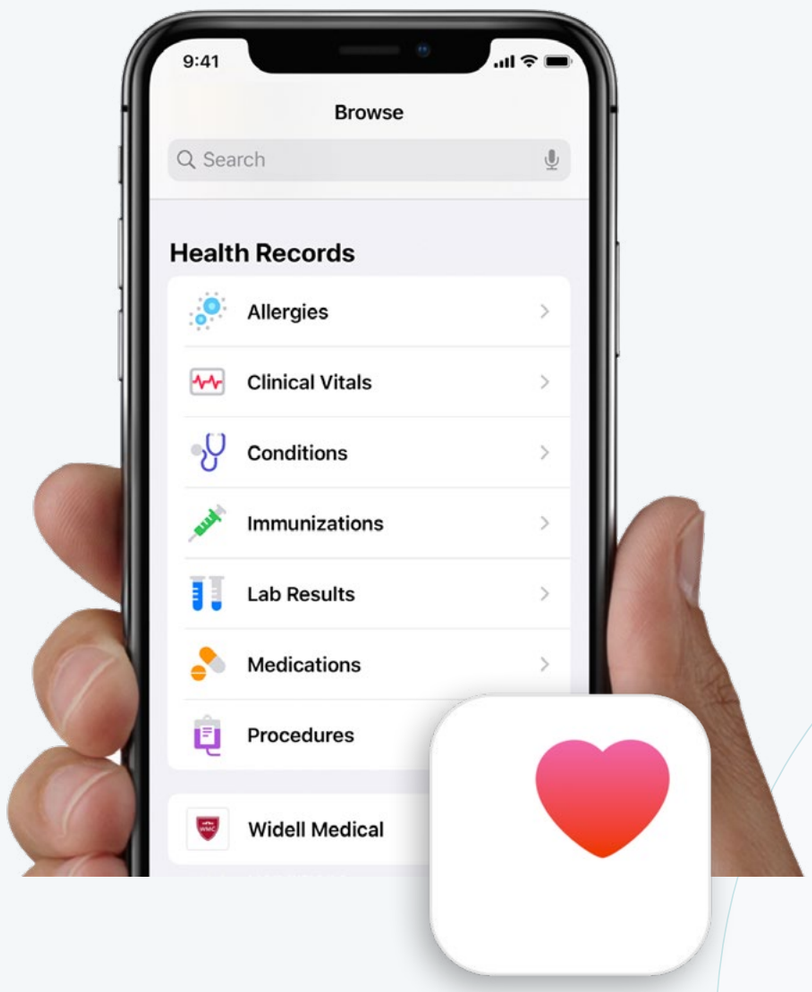
- **Business, work & education**
  To assist you in your business, make a schedule of work, surf the internet, send emails to your clients and students use smartphones to browse for information in order to complete their assignments.

- **Location & Navigation**
  To track and locate your point of interest. (GPS, Google Map)

- **Multimedia Entertainment**
  To download games, listening to music and watch movies using your smartphone (Google Play Store for Android, App Store for iPhone, Huawei AppGallery, Youtube, Netflix, Apple Music and Spotify)

- **Access the Web**
  To browse and search for any information needed. (Google Chrome, Safari, Mozilla Firefox, Opera-Mini, Microsoft Edge, Yahoo, MSN etc)

- **Practical Apps**
  To make life easier and more efficient. Seniors can use apps to help them remember where they parked, ensure that they take their medication on time, communicate with their doctor, and receive severe weather alerts, among other things. These apps help seniors live confidently and independently even when they're at home by themselves.



# 1.2.2 Potential drawbacks

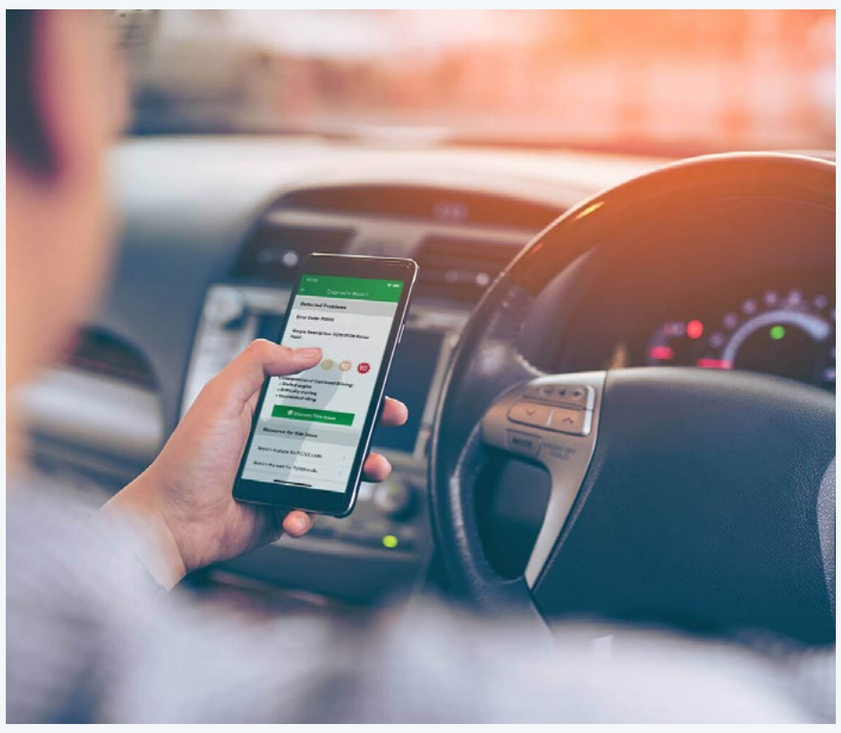
- **Human Interaction is reduced**
  Individuals who depend fully on mobile devices will not be able to interact or communicate smoothly with other human beings.

- **Lethargy and Laziness**
  Individual will have all the communication facilities in his/her hand and he/she will not have to move around physically to communicate with any person.

- **Brain Tumor**
  Mobile devices transmit electromagnetic radiations and these power radiations have the capability to change the cell and tissue organization quite quickly without even showing any reactions.

- **Lethal Road Accidents**
  Drivers who are in the habit of using mobile devices during driving concentrate more on talking instead of driving and as the result of which the probability of accidents increases phenomenally beyond recognition.

- **Learning curve**
  Seniors who struggle with technical skills may find it difficult or frustrating to learn an entirely new set of skills at their age. Or some may simply be unwilling to invest the time to acquaint themselves with a complicated new device. For these baby boomers, it may be better just to skip the smartphone and opt for a basic phone.



- **Potential for Theft**
  Unfortunately, a brand new smart mobile device can make you more susceptible to theft, since these devices are in such high demand. If the thought of staying constantly vigilant against criminals feels too worrisome, consider buying a flip or bar phone instead. These cheaper devices are much less likely to be targeted by thieves.

# 1.3 Mobile Devices for Elderly: What to look for?

It's always worth trying out a mobile phone in store, so you can get the feel of the hardware and the operating system interface. Don't be afraid to take your time and try as many mobile phones as you like before making a choice: this is a purchase you'll want to make only once every two to three years, so it pays to get it right.

1. **A simple interface**

- Look for smart mobile devices with simple, easy to use, intuitive navigation. Think of a few key things you are going to want to do - make a call, send an email, find a phone number - and ask to try them out in the store.
- Make sure you spend some time using the onscreen keyboard, too. Most will respond to key presses by making the letter or number concerned bigger and even vibrating gently. This can be a huge aid to usability, but not all interfaces are built the same.

2. **A large screen**

- As we age we gain wisdom and style, but our eyesight declines. All smart mobile devices have cameras built-in, remember. So in order to get the most use out of smart mobile devices, a big screen is a must.
- The bigger screen the more expensive the phone tends to be, and a large screen will drain battery life.

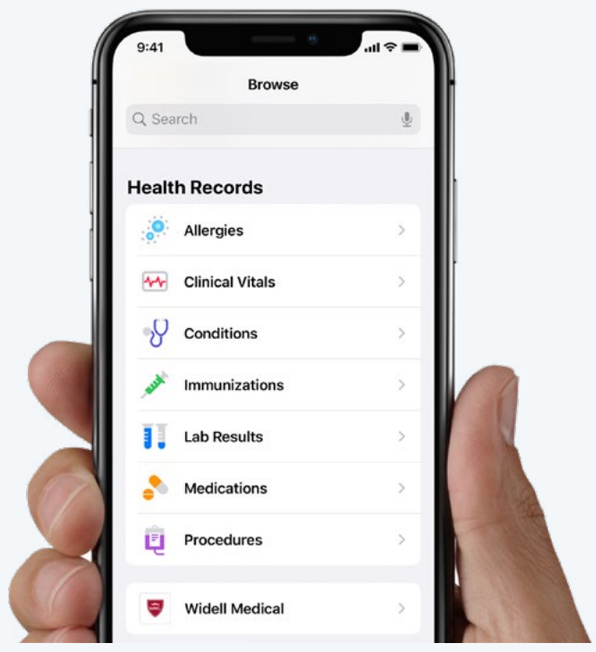
3. **Something easy to carry about**

- Smartphones contain many features; they have to include a big battery and a proper processor. Add in the large screen and a smartphone can quickly become big, and heavy.
- The smartphone with the big screen may be easy to look at, but if it is too heavy to carry about it isn't going to be much use. So once again, work out what is most important to you and do try before you buy.

4. **Enhanced volume and hearing-aid compatible phones**
- If you're an older adult who's hard of hearing, try looking for a smartphone with a louder volume range. Some phones are made specifically for the hearing impaired, and others are designed to be compatible with hearing aids. Also consider choosing a phone with a physical volume adjustment button, so you can easily change the volume without having to search for the right setting.

5. **Voice to text**
- Helping turn speech into text for people with speech and hearing disabilities on devices like phones and televisions

6. **Medical support:**
   a. Medication reminders
   b. Quick and easy access to medical professionals
   c. Medical alert systems



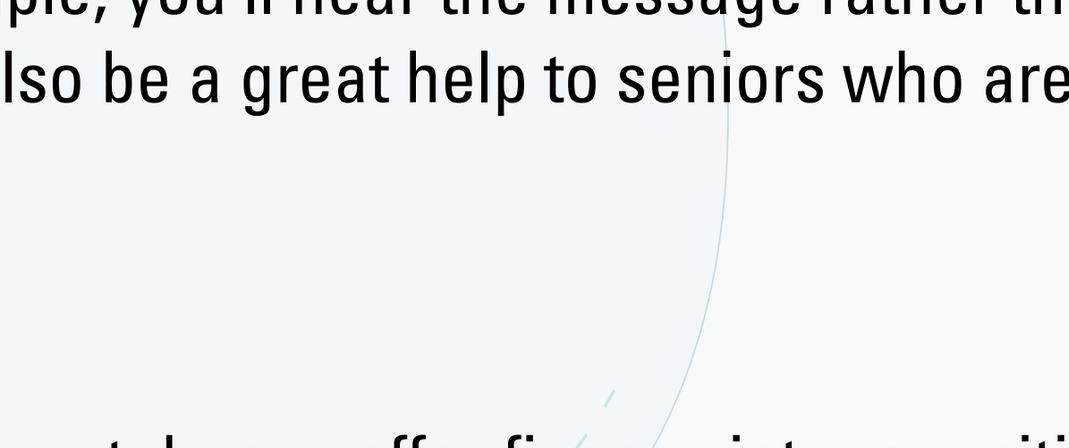

7. **Emergency & Tracking**
   a. Preprogrammed buttons for emergency or frequently used numbers
   b. Low-battery alerts that can text caregivers or friends
   c. GPS tracking

8. **Icon Size**
- Most smartphone manufacturers space out icons to make the home screen appear more clean and organized, but this can be tough for older adults with vision issues. If you'd like to switch to a zoom view, you can also do this in your settings app.

9. **Voiceover**
- This feature allows your phone to read aloud text on the screen. If you receive a text; for example, you'll hear the message rather than having to read it. This can also be a great help to seniors who are vision impaired.

10. **Fingerprint Recognition**
- Some of the newer model smartphones offer fingerprint recognition as a way of unlocking your device. You'll program your fingerprint and the fingerprints of anyone else you want to have access into your phone during set-up. For seniors who have trouble remembering a security code, but still want to protect their smartphone, this could be a great option.

11. **Long-lasting batteries**



# 1.4 Unboxing

## 1.4.1 Create an email address account on Mobile Devices

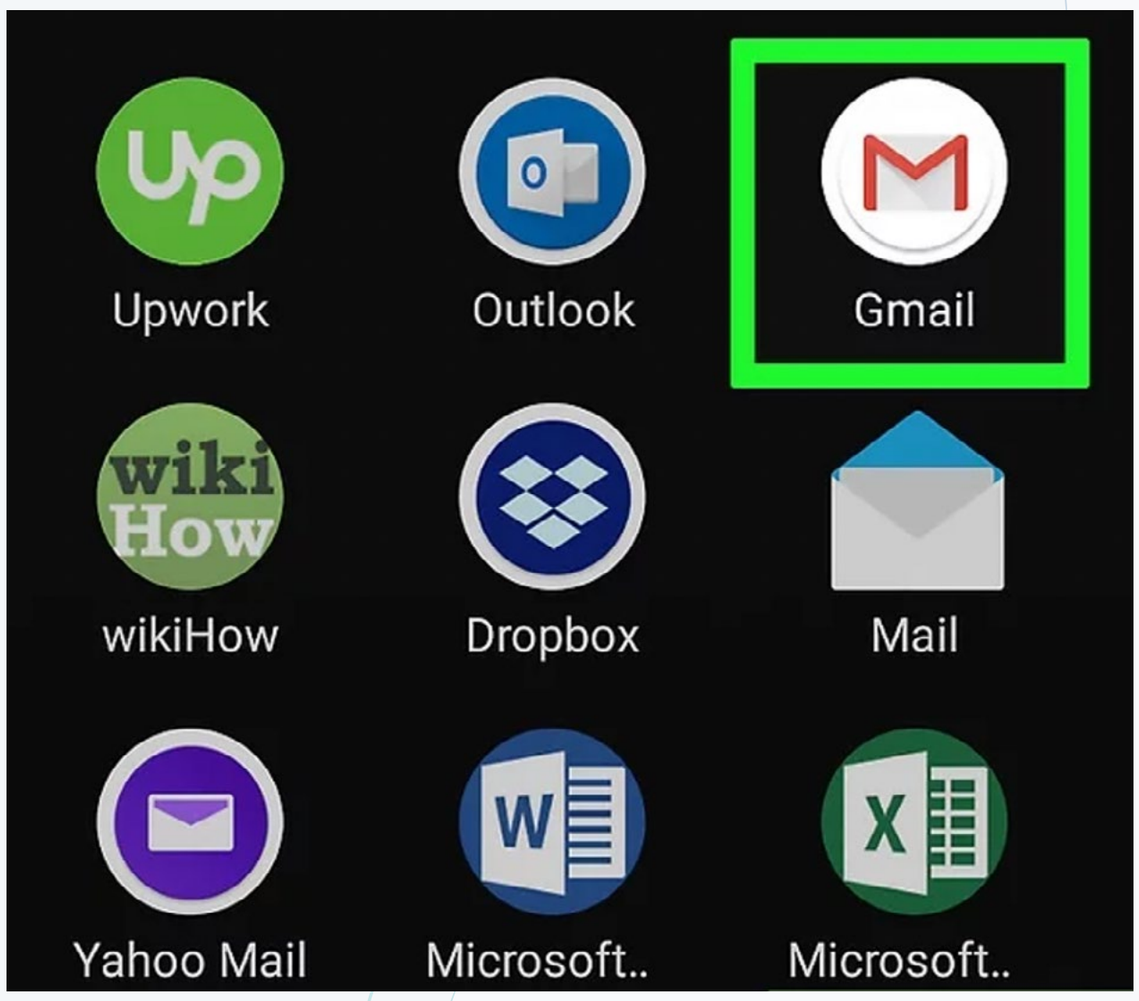
Download the Gmail app. If you haven't yet downloaded the Gmail app, open your phone's

Available on the App Store — App Store (iPhone) or

GET IT ON Google Play — Google Play Store (Android) or

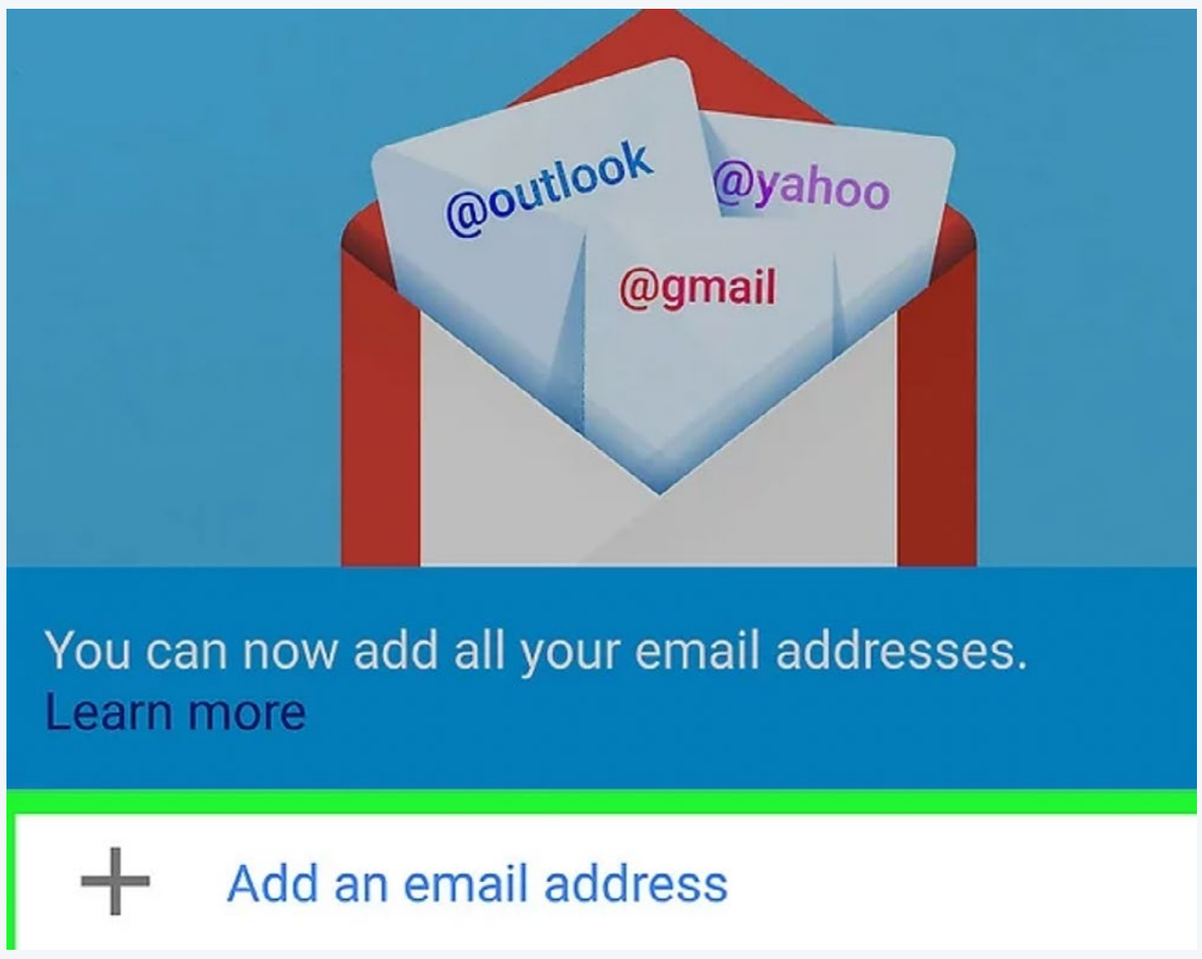
EXPLORE IT ON AppGallery — Huawei App Gallery then do the following

- **iPhone** - Tap Search > tap the search bar near the top of the screen, enter gmail > tap gmail in the drop-down menu > tap GET to the right of "Gmail - Email by Google", and enter your Apple ID password or Touch ID.
- **Android** - Tap the search bar at the top of the screen, enter gmail, tap Gmail in the drop-down menu > tap INSTALL > tap ACCEPT.
- Skip this step if you already have the Gmail app on your phone.



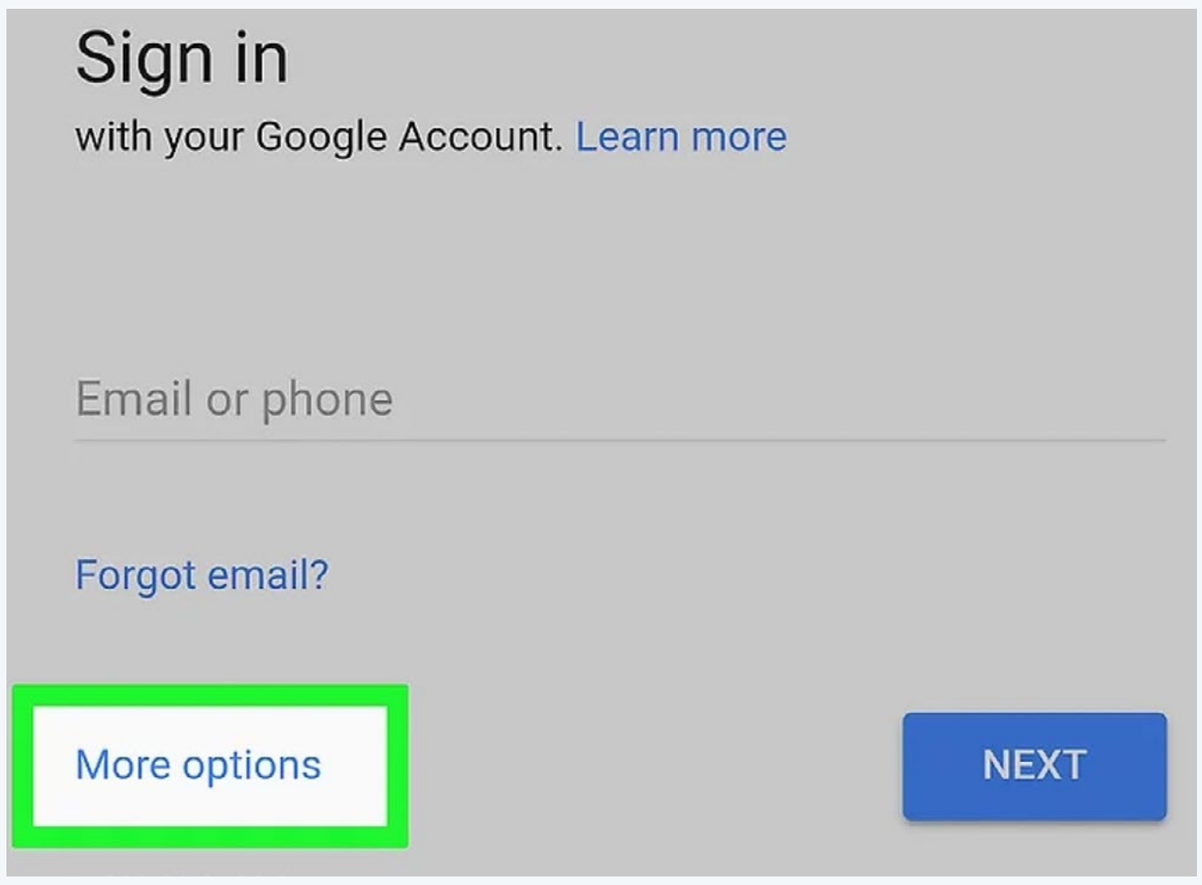
**Open Gmail**. Tap OPEN in your phone's app store > or tap the red-and-white Gmail app icon. This will open the blank sign-in page if there are no accounts signed into Gmail on your phone.

- If an account is signed into Gmail on your phone > tap in the top-left corner, tap your current email address > tap Manage accounts > tap Add account > tap Google > and then skip the next two steps.



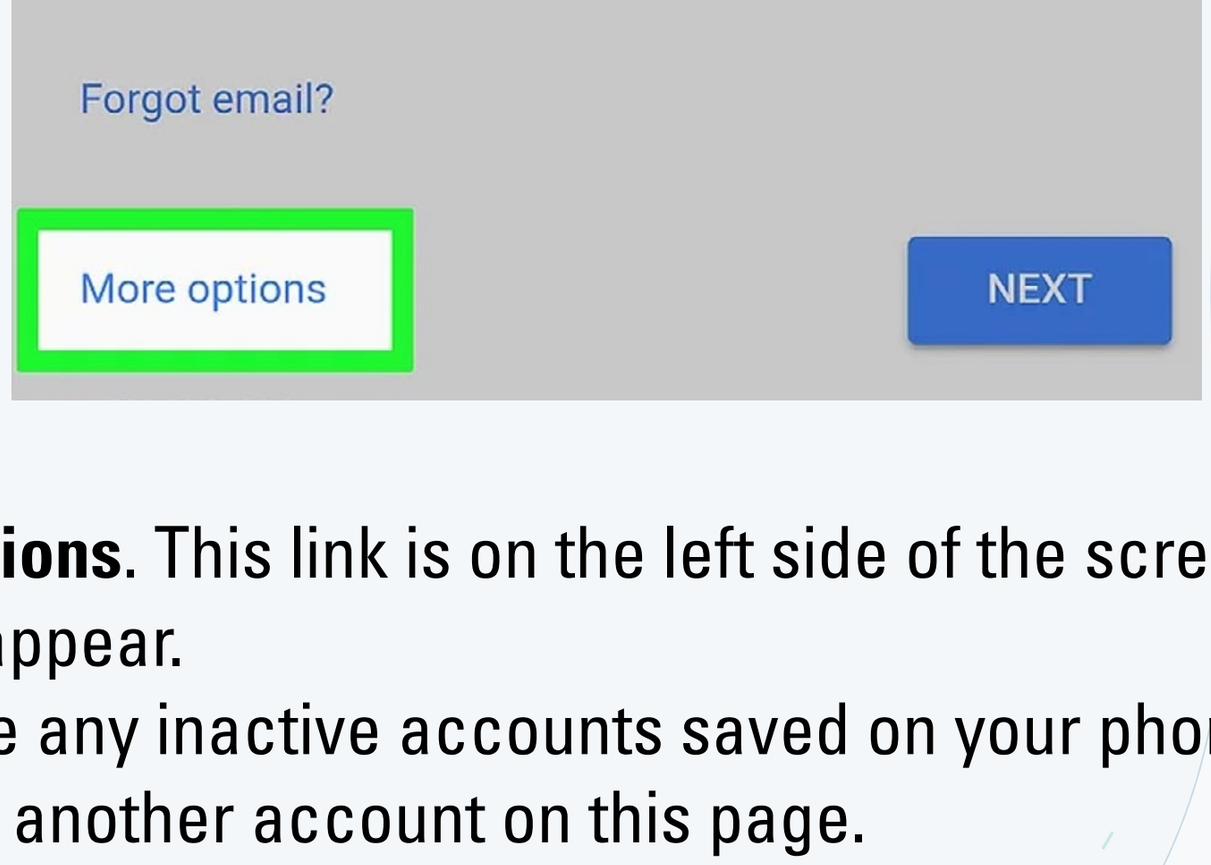

**Tap SIGN IN**. It's at the bottom of the screen.

- If you already signed in with a different account > tap in the top-left corner > then tap the profile image of the account > then tap + Add account and tap the Google option at the top.



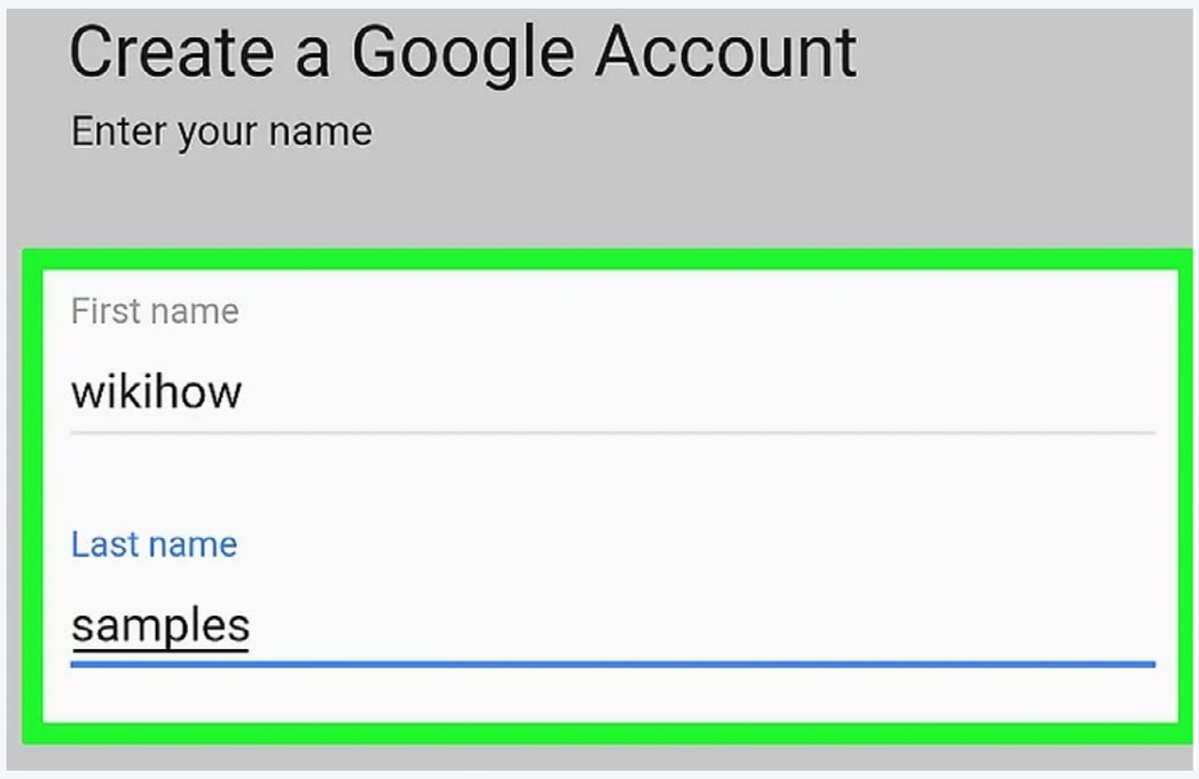

**Tap More options**. This link is on the left side of the screen.
A menu will appear.

- If you have any inactive accounts saved on your phone, you'll first have to tap Use another account on this page.

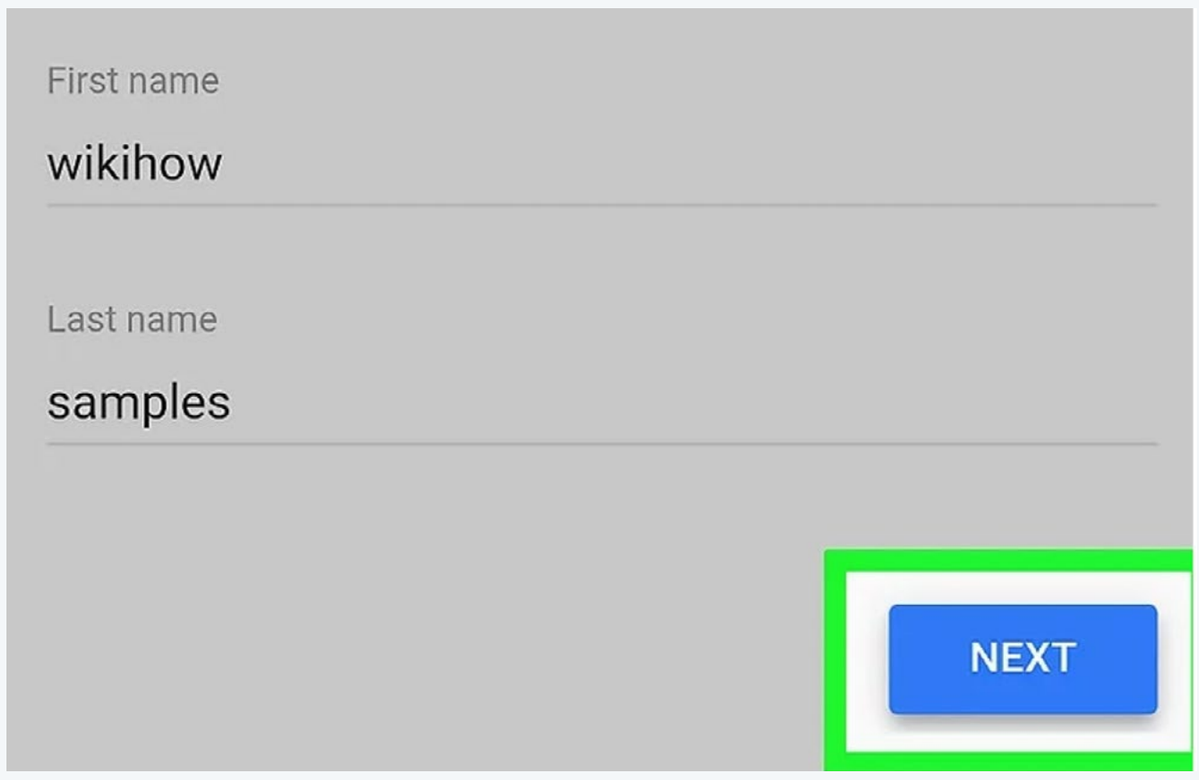


**Tap Create account.** It should be the only item in the menu.

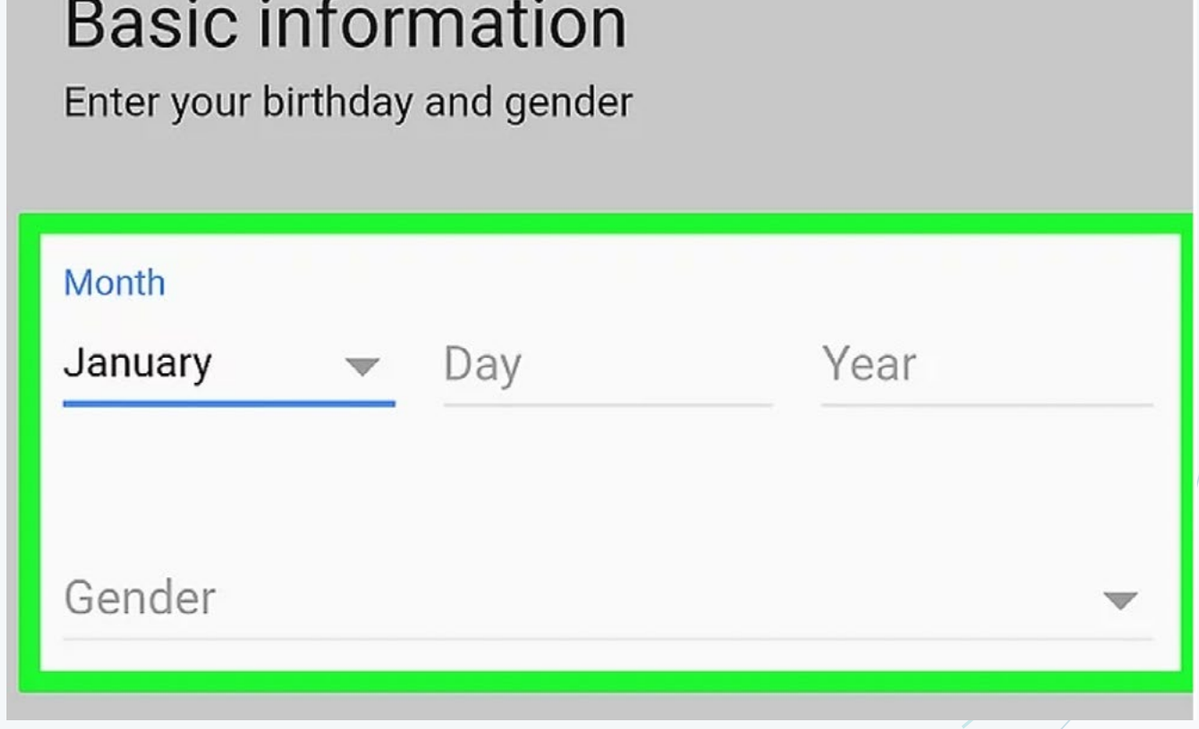
- If you were already signed into Gmail, this option will be near the middle of the page instead of in a menu.




**Enter your first and last name**. Tap the "First name" text field and type in your first name, then do the same with your last name in the "Last name" text field.

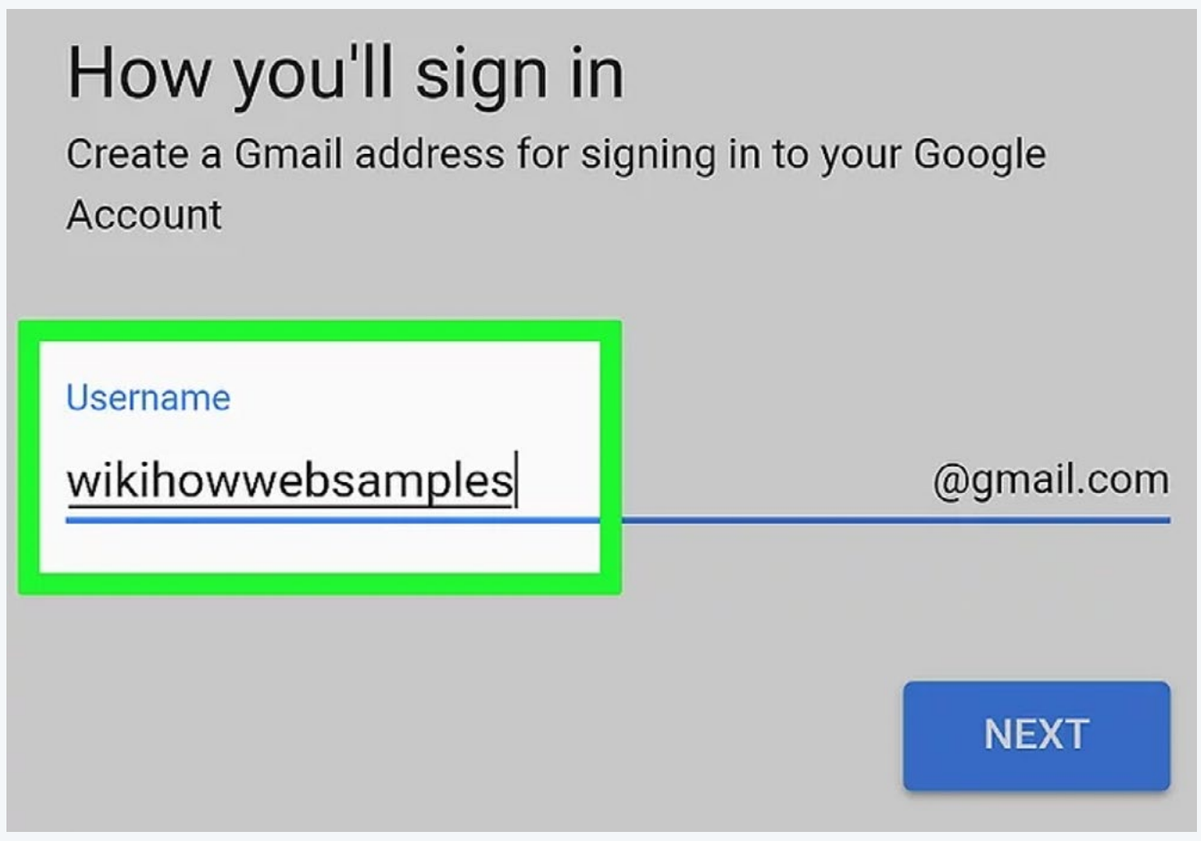



**Tap NEXT**. It's a blue button on the right side of the page.

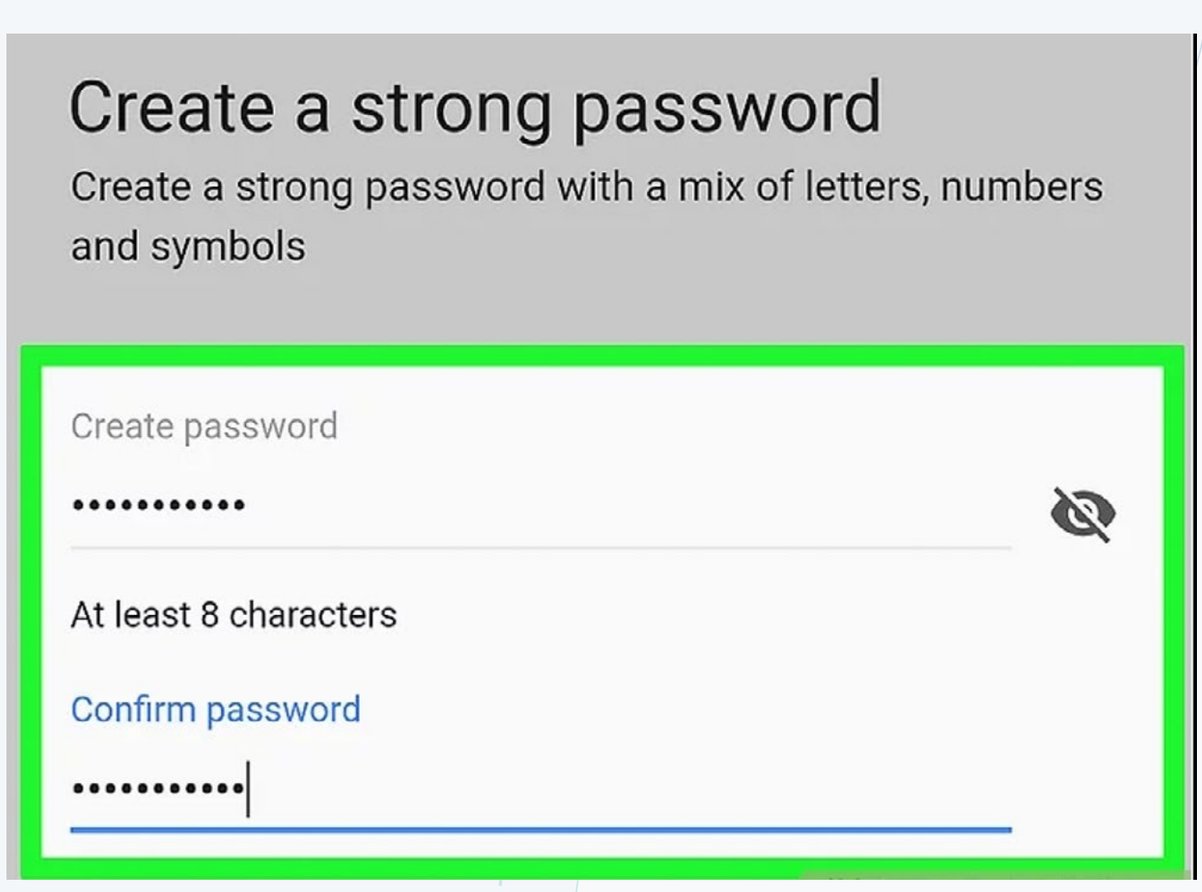


**Enter your birthday and gender**. Select the month of your birthday, type in the day and year of your birthday, and then select a gender preference from the Gender drop-down menu.

**Tap NEXT**. Create a username. Enter your preferred Gmail username, which is the name that will appear before “@gmail.com” in your email address, into the “Username” field.
This must be a username that no one else has used yet. If the username is already taken, you’ll be prompted to choose another one.

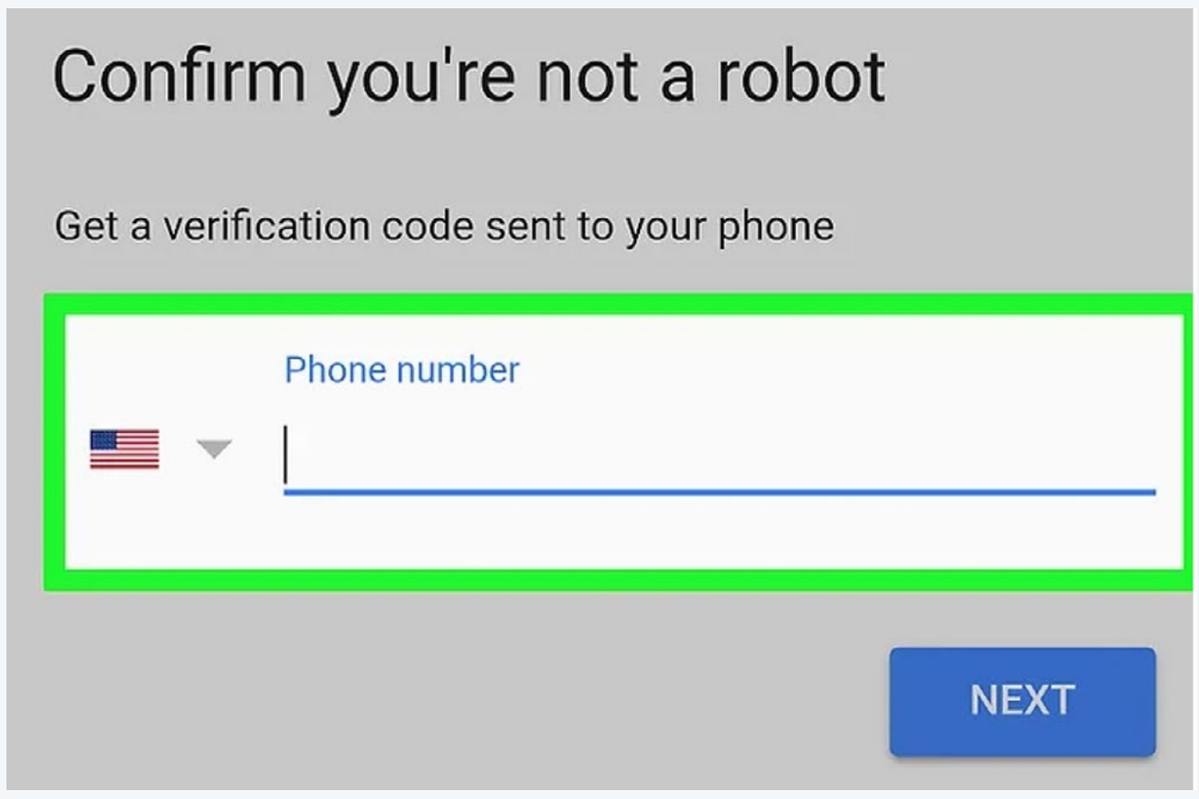



**Tap NEXT**. Create a password. Enter a password into the “Create password” text field, then repeat the password in the “Confirm password” text field.



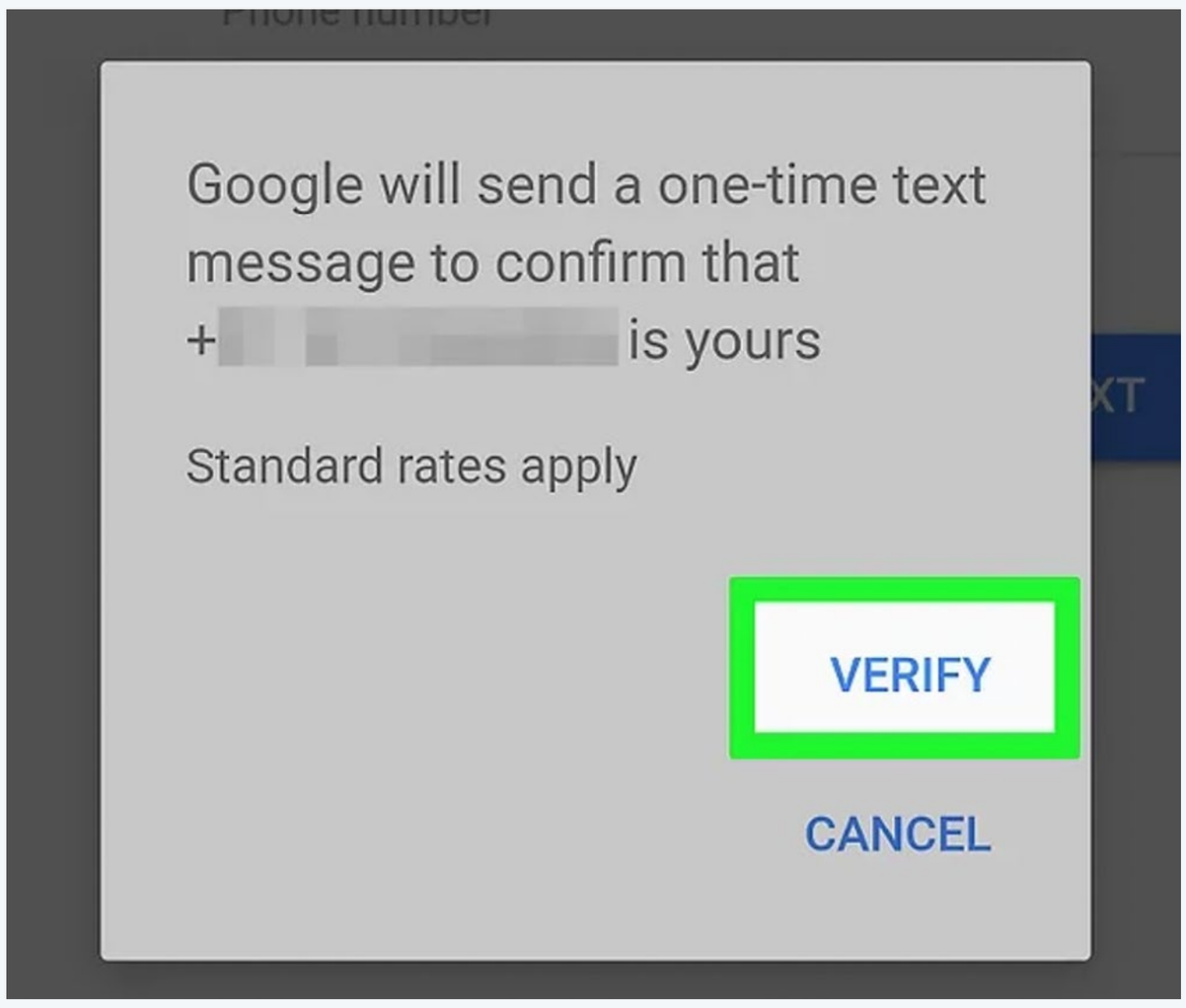
**Tap NEXT.** Enter your phone number. Enter your phone number into the "Phone number" text field. This must be a number at which you can receive text messages.

- You may see a Skip link on the left side of the page. If so, you can tap it to skip the phone number entry process.

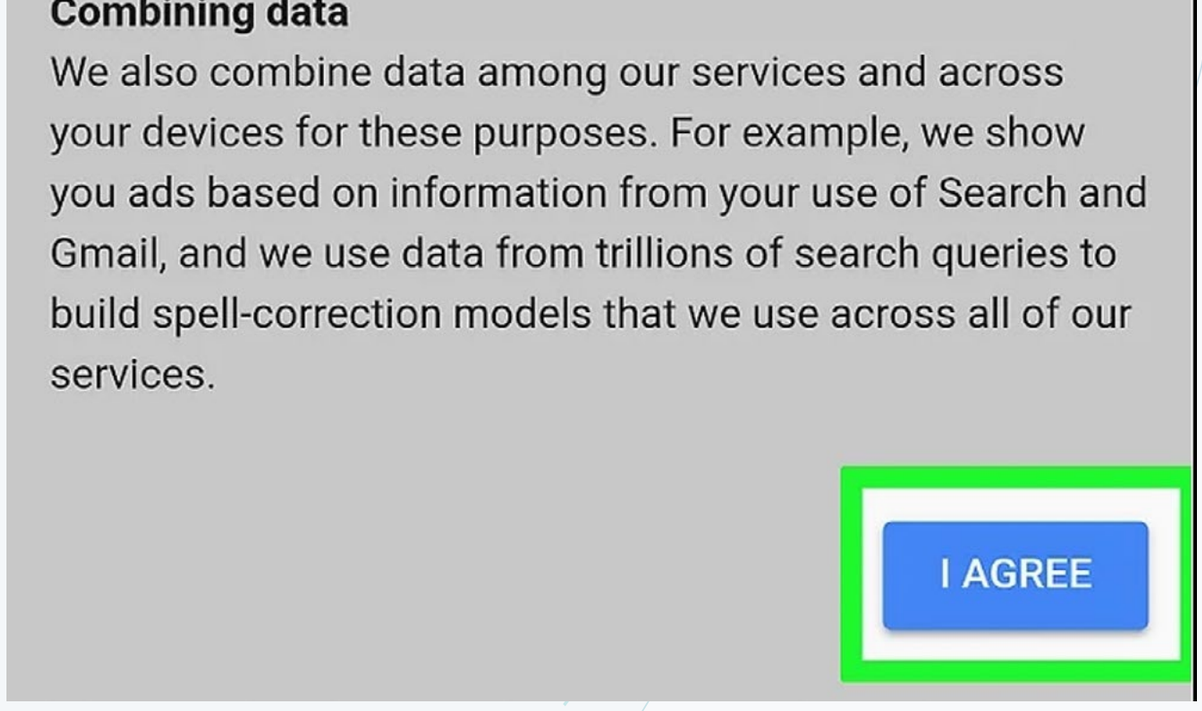



**Verify your phone number**. When prompted, tap VERIFY, then open the text message from Google, review the six-digit code in the message, type the code into the "Enter code" text field, and tap NEXT.

- Skip this step if you tapped Skip in the previous step.

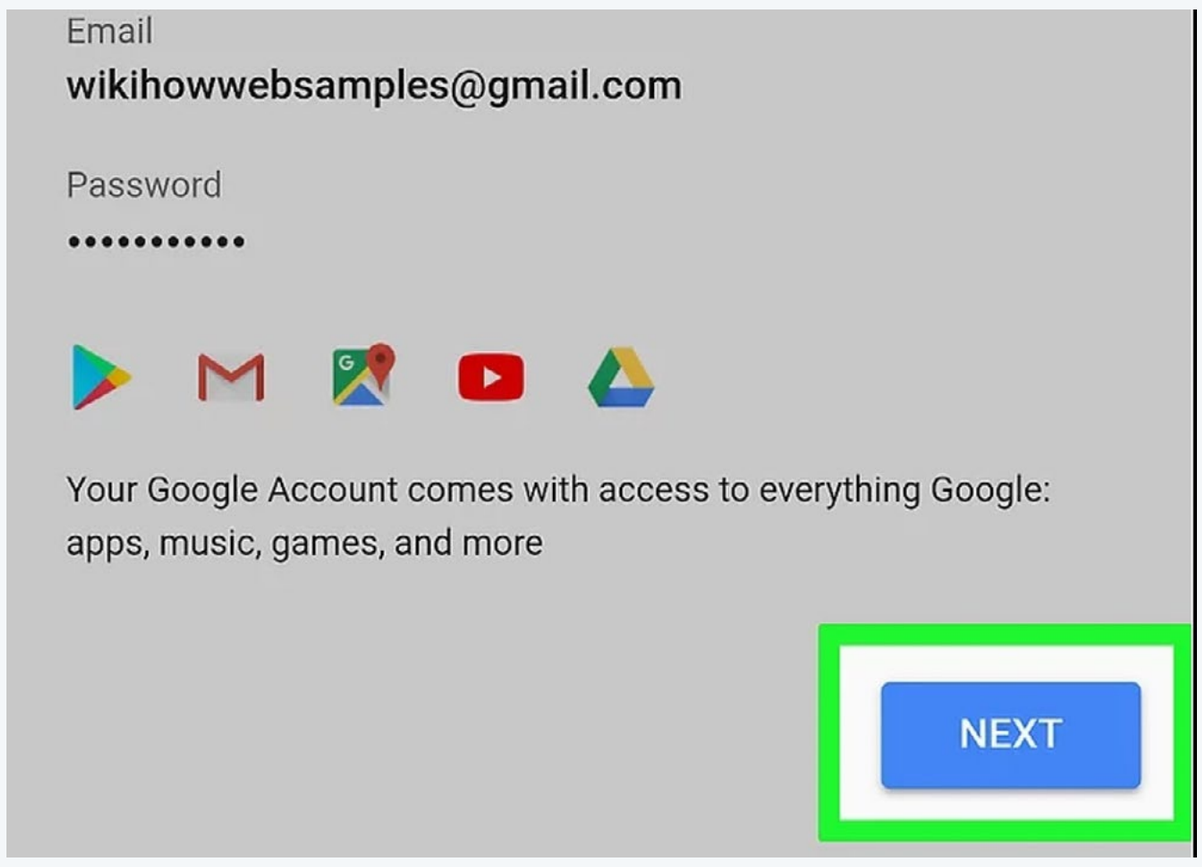



**Scroll down and tap I AGREE**. It's at the very bottom of the page on the right side of the screen.



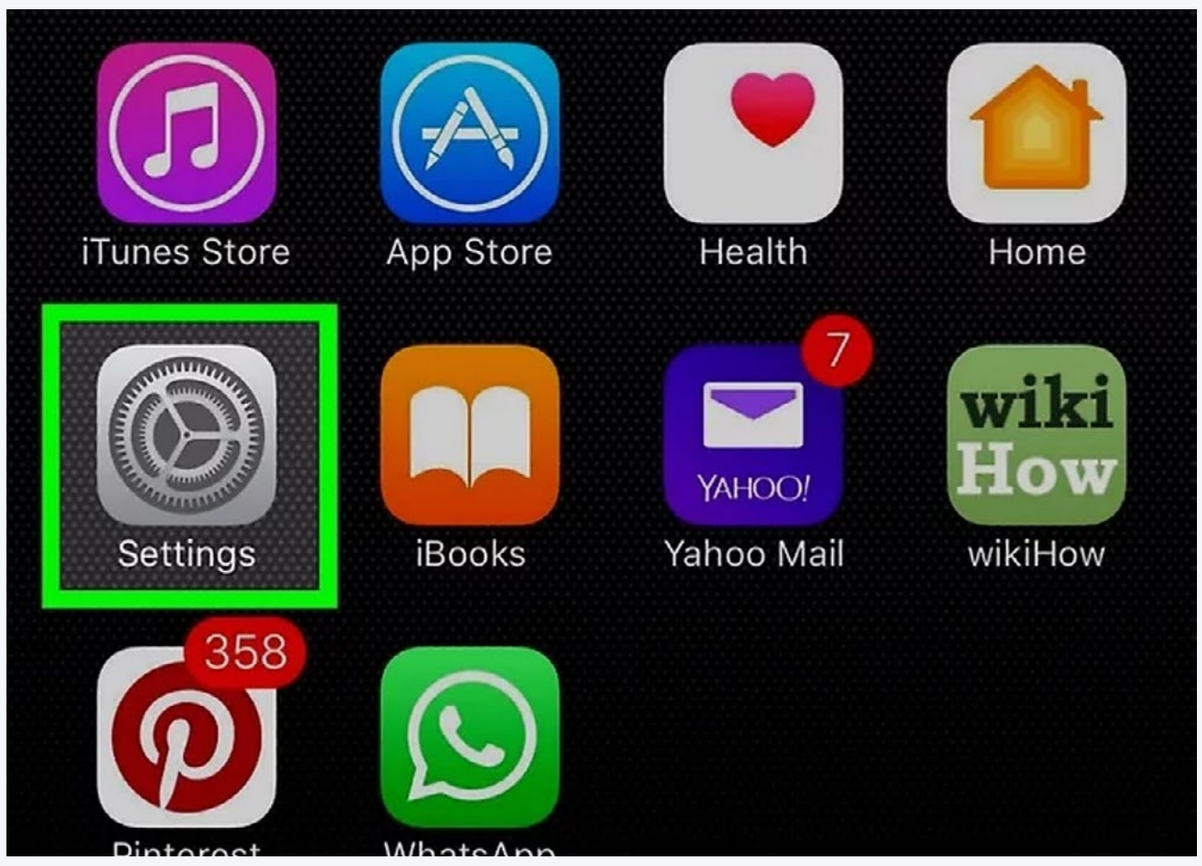
**Tap NEXT**. This will open your new Gmail inbox. You can now proceed with adding contacts, organizing mail, and more.

- Your Gmail account can also be used to sign into services like YouTube, Google Drive, and Google Docs.



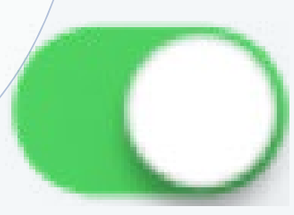

# 1.4.2 Connecting to Internet through WI-FI

**Open Settings**. It's the gray gear icon typically found on the home screen.




**Tap Wi-Fi**. It's near the top of the Settings menu.

**Slide the Wi-Fi switch to the "ON" position**



Your iPhone will scan for available networks.

- If the switch next to Wi-Fi is already green, skip this step.
- You can swipe down on the screen to refresh the list of networks.

**Tap a network name.** If the network has public access and is not password protected, your phone will connect to the network immediately. If a password is required, you'll be prompted to enter it.

- Password protected networks are indicated by a lock icon.

**Tap Join.** It's in the top-right corner. If the password is correct you will be connected to the network.

# 1.4.3 Connecting to Internet through Data Cellular

**Open the Settings app.** You can find this in your App Drawer or on your Home screen. The icon looks like a gear.

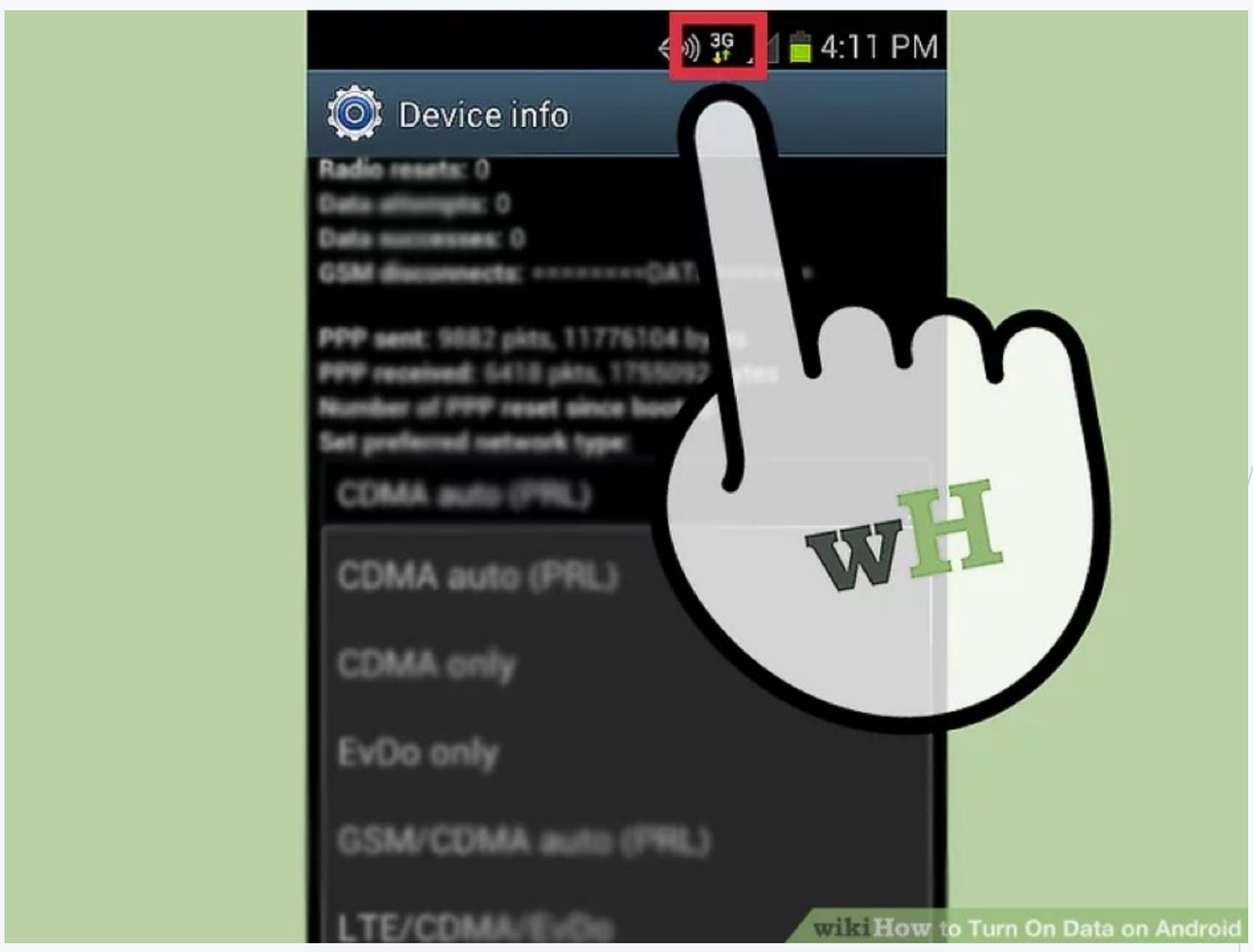
**Tap the "Data usage" option.** This should be located towards the top of the menu.

- Older versions of Android may have a "Mobile Networks" option instead.

**Tap the "Mobile data" slider.** This will toggle your mobile data ON. On older versions of Android, check the "Data enabled" box.

- Note: Your plan will need to support mobile data in order for you to enable it. You will also need a cellular signal in order to use your mobile data connection.

**Check that you have a data connection.** Next to your reception bars in the Notification bar, you may be able to see either "3G" or "4G". Note that not all devices display this when you have a data connection, so the best way to test is to open your web browser and try to visit a website.



# 1.5 How to Instil Positive Attitude towards the Usage of Smart Devices?

Today, smartphones are everywhere! Smartphones are no longer an accessory. They are a necessity. It is more common to have a smartphone than it is to have a home telephone these days.

While smartphones can help to increase productivity, they also can be a distraction to people and environment. Here are some of mobile phone netiquette to be followed (outlined by NoPhones.com):

**Obey smartphone bans**

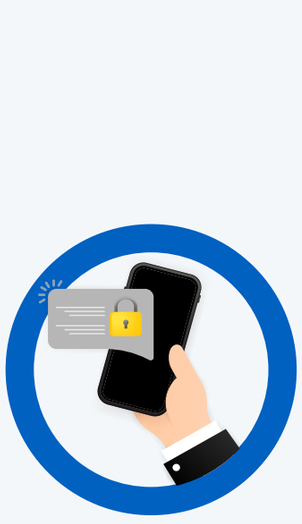
There are reasons why certain places impose rules about switching phones off. Use the silent or vibrate mode if you need to be in touch. If you really need to make or take a call, leave the area. Use common sense and when in doubt, simply put your smartphone away.

**Speak softly not LOUDLY**

Keep your voice low and discreet by directing your face down and slightly into your chest. Seriously, if you are unsure whether you're speaking too loud, just watch people near and around you and see their reaction.

**Keep your distance from those around you**

Respect others. It is not other people's responsibility to cope with your mobile phone use. Take your call and speak at a distance, say at least three metres away from the closest person.



**Keep your private conversations private**

When answering a call, don't broadcast your conversation to the whole world. No one else wants to hear your conversation.

**Respect camera phone rules**
It's really cool for you to have a camera phone. However, having a camera phone can become a problem when it is misused. Respect others' privacy and do not simply snap photos without permission. You don't know where the photo might end up!

**Brands matter**
Shop at well-known app stores, like Google Play Store or Amazon Appstore for Android. Sure, there are quite a few third-party app stores and app download websites out there, but your risk of encountering malware on alternative app stores is much higher.

**Look before you leap**
Before you download an app, check the ratings, download numbers, and reviews to gauge how trustworthy and authentic it is. If the app has a few downloads, bad ratings and negative feedback, those are warning signs that it could be malicious.

**Listen to your phone**
We know the notifications can be bothersome, but be sure to update the software on your phone. Many software updates are made in response to new security threats.

**Download free mobile security to scan every app you download**
A security app will protect your phone for you, scan and sense any malicious activity so you don't have to worry about security attacks.

**Silence your phone**
when you're at religious or worship places such as mosques, temples and churches.

**Never use phones**
in hospitals, ambulances, or any type of special ceremonies such as funerals and weddings.

**Turn off your phone**
when you're in movie theatres, cinemas, meetings, conferences, lecture halls, libraries, etc.

**Never ever** send, forward or spread any offensive, junk or hoax messages that will spread anger, panic and fear among other people.

Avoid **sending your message in CAPITAL LETTERS** or sending others text messages containing anything that you would not say in real life. It is hard to convey tones and sarcasm in texting and email.

**Don't text while doing anything** that requires you to be **attentive** such as driving or waiting at an intersection for the pedestrian signal.

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