Security Issues for Mobile Devices
Division of Effort

- What goes on the server?
- What goes on the device?
- How do you decide?
How Secure is the Device?

- Against which attackers is the device secure?
- Random web sites and mail sites?
- The owner?
- Someone who has stolen it?
- Governments and law enforcement? Which ones? Remote or local access?

This affects the decision of how much a server site can trust the device.
Human Factors

- Poor keyboard
- Phones usually with the owner—except when they’re lost
- Used in public? (Is a surveillance camera watching you when you type your PIN or password?)
Updates

• How is the device updated?
• How often is it updated?
• How long is the device supported?

Apple  Apple controls the updates, pushes them out when they need to, supports old devices for at least four years; most people update

Android  Google, the phone manufacturer, and the carrier are all on the update path. It takes a long time for updates to be available, and most phones are not updatable.
Lost Devices

• How do you track lost devices?
• What are the privacy implications?
• Do you permit remote wipe?
• What information is protected against the finder?
• Can you/should you turn on the camera and mic remotely? What are the privacy implications?
• How do you discourage or prevent resale by a thief?
Protecting Apps Against Each Other

- Can apps steal information from other apps?
- How can certain apps cooperate? How does the user know and consent? Note the risk to security (e.g., stored passwords) and privacy.
Fraudulent Apps

- App stores have made finding and distributing software very easy
- But—there have been deliberately deceptive apps that fool users
- More of a problem for Android, because there are non-Google app stores; these often have less vetting
- Especially a problem in China
Permissions

• How are application permissions managed?
• Not read/write/execute as much as access to things like the camera, microphone, location, network, contact list, etc.
• iOS: Especially sensitive ones: ask the user
• Android: Long list displayed at installation time—do people read it?