This presentation covers:

> Appearance and Attire
> Mobile Device Overview
> Laptops Overview
Qualities of a Good Technician

“Soft skills” as they are known across many industries are essential
Appearance and Attire

> Dress to the level of the client
> Be aware of generational bias
> Avoid tattered jeans, trainers, and t-shirts
> If your job involves dirty work, (e.g. pulling optic fiber cables through the overhead), jeans and chambray shirts are acceptable

Grooming
   > Watch your haircuts and (for men) beards
   > Keep your hands and nails clean

Cosmetics
   > Women are more likely to be better liked and trusted if using moderate makeup and little to no perfume
Mobile Device Overview
Mobile Device Overview

> Tablet: A mobile device that has a touch screen, camera(s), microphone, and possibly one or more ports such as sound, USB, miniDisplayPort, or miniThunderbolt.
Mobile Device Overview

> GPS: Global positioning system or GPS is a series of satellites that provide location, movement, and time information to other devices.
Mobile Device Overview

> Smartphone: Has the capability to make a call and run apps, play music, track movement using GPS, connect to a wireless network, connect wirelessly to other devices, connect to the Internet through the phone network or wireless network and take high-resolution pictures and video.
Mobile Device Overview

- Phablet: A cross between a smartphone and a tablet.
Mobile Device Overview

> **e-reader**: Also known as an e-book; has an LCD screen designed for reading and storing digital books, magazines, and other online materials.
Mobile Device Overview

> Smart camera: Has one or more extra capabilities than a digital camera that are used for such things as facial recognition, measuring, inspection for quality assurance, surveillance, and robot guidance.
Mobile Wearable Technology Devices

> Smart watch: Like a tiny computer strapped to your wrist
> Fitness monitor: Detects movement (step counting), calculates distances (some have a GPS feature), counts calories, measures heart rate and pulse, and measures sleep
> Glasses: A wearable technology that has a tiny computer display visible to one eye; allows taking photos, videos, making calls; commonly has a processor, RAM, and storage
> Smart shoes: Allows control of wireless devices such as smartphones and appliances using foot movements
> Earring: Wearable technology that tracks heart rate and calories burned
Using Mobile Devices

> A mobile operating system primarily uses a mouse or keyboard to interact with the operating system, a finger, stylus, spoken word, or multiple fingers are used

> The notification area for a smartphone is usually provided by pulling down a menu from the top of the screen

> The home button is used to return to the main home page, but keep in mind that other home pages may be available to the left or right

> The recent apps button shows thumbnail views of recently used applications; if you touch a thumbnail, the application opens full screen

> Configuration is commonly performed through the mobile device’s Settings option
Cell Phones

> IMEI and IMSI: International mobile equipment identity (IMEI) is a unique number given to a particular cell phone and some satellite phones.

> IMSI: International mobile subscriber identity is a unique number that is stored in your smartphone’s subscriber identification module.

> SIM card: Subscriber identification module card is used in mobile phones, satellite phones, mobile devices, and laptops.

> PRI and PRL Updates: Each phone contains a specific product release instruction (PRI) configuration file. This file contains what frequency bands can be used and the default preferred roaming list (PRL) to use.
Mobile Apps

Applications, commonly called apps, for mobile devices come with the device, can be downloaded free of charge or can be purchased through:

- The App Store (Apple iOS devices)
- Google Play (Android devices)
- Store (Windows devices)
Mobile Apps

Common Mobile Apps

> Android apps: Gmail, Google Maps, Gallery/Photos, MyLibrary, Chrome, Play Music, Clock, and Play Store

> iOS apps: Mail, Maps, Photos, iBooks, Safari, iTunes, Calendar, and App Store

> Windows apps: Mail, Maps, Photos, Reader, Edge, Music, Calendar, Windows Store
Mobile Device Wired Connectivity

> Mobile devices have many of the same ports that computers do, but in smaller versions

> Mobile devices frequently have either a micro-USB or a mini-USB port

> There is also a mini-/micro-AB port that accepts either a mini-/micro-A or a mini-/micro-B cable end

> The micro-USB ports are now a standard interface for smartphones
Apple Connectors

Apple Lightning Connector

Apple Lightning port

Apple Lightning port and connector

Mobile connectors

Apple 30-pin dock connector
Apple Lightning connector
Micro-USB
Mini-USB
Traditional USB
Bluetooth: A radio-based wireless technology used to connect two or more devices together that are commonly within close range of one another. This type of connectivity is called a wireless personal area network (PAN).

Bluetooth has three classes of devices:
- Class 1: Range up to 328 feet (100 meters)
- Class 2: Range up to 33 feet (10 meters)
- Class 3: Range up to 3 feet (1 meter)
Mobile Device Wireless Connectivity

> IEEE 802.11 Wireless: Used to connect the mobile device to a wireless network that operates in the 2.4-GHz and/or 5-GHz range
> Airplane Mode: Allows you to disable all wireless communication (Wi-Fi, mobile broadband, Bluetooth, GPS or GNSS, and NFC)
> Hotspot: A wireless network that has free Internet access
> Tethering: Allows sharing an Internet connection with other mobile devices in the nearby area
> Infrared (IR): A radio-based wireless technology that operates in the 300-GHz to 430-THz range, but many devices use either 2.4GHz or 27MHz
Mobile Device Wireless Connectivity

> Cellular Data: Two methods for sending data over a cellular network are Short Message Service (SMS) and Multimedia Message Service (MMS)
  > SMS is used for text messages
  > MMS is used for visual data such as photos or video

> VPN: A virtual private network (VPN) is used to connect one device to another device through a public network such as the Internet
Laptops Overview
Laptop Hardware

- A laptop has similar parts and ports as a desktop computer, but some of these components are smaller.
- Whenever taking anything out of a laptop, one of the major issues is tiny screws.
- Use a magnetic screwdriver to remove the screws or place the screws on a magnetized tray.
Laptop Repairs Overview

> Use proper anti-static procedures
> Organize your parts
> Take photos
> Take notes
> Use appropriate tools
> Always refer to the manufacturer’s directions when removing and installing parts
Laptop Memory

Laptops use a special form factor called a small-outline DIMM (SO-DIMM)

Another type is MicroDIMMs

SO-DIMMs are the most popular and include:
  > 72-pin version for 32-bit transfers
  > 144-, 200-, 204-, or 260-pin versions for 64-bit transfers
Laptop Storage

> Laptop hard drives come in two major form factors
  > 1.8-inch: found in laptops, ultrabooks, and ultraportable devices such as MP3 players
  > 2.5-inch: designed for laptops
Laptop Display

> Some mobile devices serving as laptops have removable screens
> Some laptops have rotating screens
> Review Chapter 9 and refresh yourself on the following terms:
  > LCD
  > TTL
  > IPS
  > fluorescent and LED backlighting
  > OLED
Mobile Device Security

Laptops have special physical security needs, optional security measures:

> Use a nondescript bag to carry a laptop
> Have an engraved permanent asset tag attached
> Install a physical laptop lock or laptop locking station
> Use the universal security slot (USS) that allows a cable lock or laptop alarm to be attached
> Software packages exist that automatically contact a tracking center in case of theft
Computer Terms

Refer to the glossary terms at the end of the textbook chapter. Review Chapter 11 and become familiar with the terms.
This PPT deck was developed to support instruction of

The Complete CompTIA A+ Guide to IT Hardware and Software
7th Ed.

All text and images are

© 2016 Pearson Education Inc.

Fotolia Image Credits