

MOBILE CLIENT DEVICES AND PERVASIVE COMPUTING

Lesson 02

Mobile Devices— Classifications and Characteristics

CLASSIFICATION OF MOBILE DEVICES

- Smart Phones
- Digital Music Players
- Mobile Computing Systems— Tablets, Notebook, iPad,...
- e-Book Readers, Kindle
- Smart identification devices

SMART IDENTIFICATION DEVICES

- Smart cards
- Smart labels
- Smart tokens
- RFIDs

MOBILE DEVICES

- Smart Sensors and Actuators
- Smart Home devices
- Set-top Boxes
- Automobile-System devices

SMART PHONES SUCH AS IPHONE

- Runs on iOS 8, iOS11, ..
- Flash memory 16 GB, 64 GB, and 128 GB, ...
- Wide, touch-sensitive, 45.44-inch display dual-domain wider view screen

IPHONE

- Resolution of 1334 × 750 1136 pixels, 1400:1 contrast and maximum 500 cd/m² brightness, and LCD backlit display with a pixel density of 326 pixels/inch and pixel size being 78 μm.

IPHONE

- Includes multi-touch sensing and virtual keypad
- Virtual keypad, automatic spell check, predictive word capabilities, and a dynamic dictionary

IPHONE

- High-definition video and video editing.
- An 8 MP auto-focus with focus pixels camera.
- 1.2 MP FaceTime camera for FaceTime call

IPHONE

- Face-to-face video calling or even conferencing
- Enables video calling over Wi-Fi.

IPHONE

- SMS, calendar, photo, camera (5-MP camera), maps weather, note pad, clock, settings, phone, mail Web browsing and multimedia player.
- Internet HTML Web browsing service and e-mail service and works with any Mac or PC

DIGITAL MUSIC PLAYERS

- Include media-playing hardware or handheld (portable) music players for
- Digital media file formats such as MP3, AAC, RealMedia, WMA, and WAN

DIGITAL MUSIC PLAYERS

- Music files encoded in formats such as MP3, WMA, Realmedia
- On mobiles, and laptops
- Realplayer, Windows Media Player, QuickTime Player media-playing software

DIGITAL MUSIC PLAYERS

- Use flash memory
- Capacity 128 MB to over 80 GB

TABLET

- Apple iPad Air tablet
- CPU 1.4 GHz dual-core, 1 GB RAM, flash memory 128 GB model,
- Size: 9.7 inches (250 mm) 2,048 × 1,536 pixels colour IGZP display, (264 pixel per inch) with a 4:3 aspect ratio

TABLET AND E-BOOK READER

- • Multi-touch screen, headset controls, M7 motion co-processor, proximity, ambient light sensors
- 3-axis accelerometer, 3-axis gyroscope, digital compass, and dual microphone, Camera, Video

IPHONE

- Wi-Fi 802.11 a/b/g/n at 2.4 GHz + 5 GHz, • GPS, Bluetooth 4.0, iTunes Store, iBook Store
- iCloud, Game centre,
- Siri (intelligent personal assistant + navigation)

IPHONE

- Safari, mail viewer, photos viewer, video player, music player, app store, maps, notes, calendar, photo booth, and contacts
- Integration with Twitter, Facebook, and Skype

E-BOOK READERS

- Adobe e-book reader multiple languages, reader software running on a computer or mobile
- e-books, newspapers, and magazines
- Ability to read in sunlight and should be portable

KINDLE E-BOOK READER

- Small and light and downloads books quickly with Wi-Fi
- Hand-tuned fonts for easy reading
- Reads like a paper with no glare.

KINDLE E-BOOKS

- Large number of books including children books
- Parental control feature for preventing unwanted downloads by children.
screen size 7 and 8.9 in.
- Kindle tablets have three versions, 16, 32, and 64 GB.

SUMMARY

- Classifications— SmartPhone, Digital Music Players, Tablets, eBook Readers, Smart identification Devices, Home Devices, Automobile System devices

End of Lesson 02

Mobile Devices— Classifications and Characteristics