HMI - MODULE 5 - CHAPTER 5

INTERFACE DESIGN FOR MOBILE DEVICE

Mobile Ecosystem

- group of devices, platform software (application or system), companies, & the united set of service offered by a mobile device company including device hardware, OS, app store & user account.
- mobile platform that changed mobile industry: Android, iOS, Window phone & Blackberry.
- mobile app development frameworks
  1) React Native
  2) Flutter
  3) Ionic
  4) Xamarin

Types of mobile applications

1) Native App
   - windows phone → .NET
   - iOS → Objective C / Swift
   - Android → JAVA
2) Web App
3) Hybrid App
   - combination of Native & Web App
   - made with HTML, JS, CSS

Widgets

- Information Widgets
- Collection Widgets
- Control Widgets
- Hybrid Widgets

Points to remember while designing a widget

- Focus on the main & imp information of the widget
- Select correct widget type
- Different sizes should be planned

Mobile web widgets

Pros
- Easy to create using HTML, CSS, JS
- Simple to deploy
- offer improved user experience & rich UI

Cons
- Require compatible widget platform to be installed on the device
- Cannot run in any mobile web browser
- Require learning additional proprietary, non web standard technique

Games

- Native app based on similar SDK platform to create rich gaming experience

Pros
- Simple to use & provide rich & addictive experience
- Easy portability to multiple devices

Cons
- Costly to develop
- Difficult to port it to mobile web

Mobile Information Architecture

Building blocks of Information Architecture
- Information Architecture
- Interaction Design
- Information Design
- Navigation Design
- Interface Design

Characteristics of mobile Information Architecture
- Keeping it Simple
- Site Maps
- Clickstreams
- Wireframes
- Prototyping

Mobile information architecture patterns (Top 6 Mobile Into architecture patterns)
- Hierarchy
- Hub & spoke
- Settled doll
- Tabbed View
- Dashboard
- Selected View

Points to remember while designing a good mobile information architecture
- Defining the product goal
- Create the inventory on the content
- Planning the navigation system
- Simplify the design
- Research & feedback
- Constantly review the IA

Mobile 2.0

- Derived from web 2.0

Mobile Design

Elements of mobile design
- Context
- Content
- Navigation
- Layout
- Color
- Graphics

Dos
- Research before designing
- Prioritize Features
- Provide backup to customer feedback
- Clear and concise navigation

Don'ts
- Don't forget your target
- Don't use jargon
- Don't limit the interaction
- Don't make the customer wait for the web

Mobile Design Tools

- Adobe Photoshop
- Sketch
- InVision
- Avocode

	Native	Hybrid	Web
Cost	Highest Cost	Similar to web cost	Lowest cost
Code Reusability	Only work for one platform	works for multiple platforms	Browser compatibility & Performance are the only concerns
Device Access	SDK gives access to all device API	Many device API closed to web app can be accessed depending on tools	Only few device API can be accessed
UI consistency	Familiar & original UI component	Native look	Native look
Distribution	App Store provides MKT benefits but also have requirements and restriction	⇒ Same	No restriction to launch but no app store benefit
Performance	has direct access to platform functionality ⇒ better performance	For complex apps, abstraction layer often prevent native like performance	Performance based on browser & network connection
Monetization	more opportunities but store takes a percentage	⇒ Same	No store commission or setup cost but there are few monetization method