SD Final Study Guide

Chapter 7

* + Interfaces – the WIMP model
    - Windows, icons, menus, pointer
  + PARC
  + *Isomorphic* icons
    - Mapping between what is being represented and how it is represented
  + Typography considerations
  + Website breadcrumb navigation
    - Peruse other pages without losing track of location
  + VR, AR
  + Voice-to-text
  + Context-based advertising
    - Aware of location, ping nearby stores, ethical?
  + Don't Make Me Think!
  + How to configure pages for Scanning
    - User scans many important items at once
  + Three rules if you present instructions
  + Visual Hierarchies – vertical vs horizontal
  + Optimizing user choices
    - What is the best way for users to use menus, find files, save documents, etc
  + Home pages
  + Navigation
  + Site ID's – top of page and on every page

Chapter 8

* + Prototypes – low vs high fidelity, issues
  + The "wizard of oz" model
    - a type of user-research method that involves interaction with a mock interface controlled by a human
  + Storyboards
  + Conceptional models & metaphors
  + The Doherty Threshold
    - Productivity soars when a computer and its users interact at a pace that ensures that neither has to wait on the other
  + Wireframes
  + Gamification
  + Design Thinking
  + Arduinos and Microbits
  + SDK's

Chapter 9

* Use cases: actors, goals, system
* Databases – reality, data, metadata
* Four step process of database design
* Database lookup tables – what & why
* Key database design best practices
* Database anomalies
* Data warehouse, lake, mining
* ER diagrams
* Data visualization
* Displaying 'centrality'
* Dashboards
* Human-centered design
* Ethical concerns : FATE
  + Fairness, Accountability, Transparency, and Ethics
* Data formatted in XML
* JS data types, arrays, objects
* JSON

Chapter 10

* OOP – classes, objects, attributes, methods
* Journey Maps
  + a visualization of the process that a person goes through in order to accomplish a goal
* Pinch Points
* Activity Diagrams vs Flowcharts
  + Activity Diagrams – flow of activities in a system, interactions between system activities
  + Flowcharts – sequence of steps on an event, process, or system

Chapter 11

* UX Deliverables
* Garrett's 5 levels of User Experience
  + Strategy, scope, structure, skeleton, and surface
* AI and Design
* Refactoring
  + Addressing technical debt, quickly fix trade-offs made
* Lean UX, MVP's
  + MVP – minimum viable product that can be built to test assumptions
  + Like agile ux, less focused on deliverables, more team collaboration
* Agile, Scrums, Sprints
  + Agile – iterative ux lifecycle
  + Scrum – medium size team working on projects and deliverables
  + Sprint – few week time period focused on one sprint goal
* Kanbans
  + Visual board to track process, used in kanban development cycle
* Web Site Maps
* Breadcrumb navigation
* VSD and Conscientious Design
  + Designing carefully around values
* Retrieving keys from JSON array
* Heuristic evaluation
  + Use rule of thumb to measure usability of UI’s

Chapter 12

* Architecture
  + Architectural decisions are influenced by nonfunctional product characteristics, product lifetime, software reuse, number of users, and software compatibility
* Functional vs non-functional attributes
  + Functional requirements are what a product MUST do (features/functions)
  + Non-functional requirements describe the properties of a feature (responsiveness, reliability, availability, etc)
* Cloud based software
  + Cost saver, secure, flexible and mobile, loss prevention, sustainable, collaboration ease
* Virtualization and Hypervisors
  + Hypervisors provide the emulation that simulates the desired operation of the VM, it’s the layer between the VM and actual hardware
* VM's
* Containers, Docker
  + Containers are small VMs that only virtualize an OS and take seconds to start
  + Docker is a software that allows you to create free containers for any machine