1.1: Collaboration & Why it’s Important for the Industry

Video 1

* Example: Facebook
  + Special areas that encourage collaboration
* Effective collaboration produces computing innovation that reflects the diversity of talents and perspectives of those who design it
* Computing innovation
  + Program as an integral part of its function
  + Can be physical (ex. Self-driving cars), non-physical computing software, or a computing concept like e-commerce
* Super Mario Brothers 3
  + Kensuke Tanabe & Shigeru Miyamoto collaborated to use both their ideas for how game levels should be structured to make SMB3
  + Tanabe liked vertical (up-down) levels
  + Miyamoto liked horizontal (left-right) levels
  + Characters could move up, down, left, right, etc.
* Collaboration w/ people w/ diverse perspectives helps avoid bias in development of computing innovations
* Practice: What are the benefits of collaborating with your peers?
  + B: Effective collaboration produces computing innovation that reflects the diversity of talents and perspectives of those who design it
* Takeaways
  + Interpersonal skills learned through collaboration:
    - Communication
    - Consensus building
    - Conflict resolution
    - Negotiation
    - Matter in all fields

Video 2

* Pair programming: when two programmers work together as a pair
  + Driver: writes the program code
  + observer/Pointer/navigator: reviews each line of program code as it is typed in, helps the driver when they need it, provides their perspective
* Think-pair-share: think through a problem alone --> pair with a partner to share ideas --> share results with the class
  + Ex. like charades
  + The thoughts and ideas of others help you come up with new things
* Leave comments in code
  + Helps communicate with partner
  + Helps you communicate/remember your ideas for yourself
  + Acknowledge code segments used from other sources; reference where U got them from
  + Acknowledge media used from other sources: reference where u got them from in a comment
  + Differentiate what you did and what your partner(s) did
  + Clarify the functionality of your code
* Tools to help collaborate in class
  + Repl.it
  + GitHub - collaboration & repository
    - Repository = a place where you can put all your projects and get comments/feedback on them
  + Shared document or folder
  + Ask friends to test drive program & give feedback
* Takeaways
  + Consultation & communication with users are important aspects of the development of computing innovations
  + Information gathered from potential users can be used to understand the purpose of a program from diverse perspectives & to develop a program that fully incorporates these perspectives
  + Online tools support collaboration by allowing programmers to share & provide feedback to each other