1. What is data?
   * Known fact that is recorded and has meaning
2. What is a stream
   * Continuous flow of data
   * If want video on another computer
     + Have to download entire video
   * A stream is a concept
   * All files can be streams
3. What is a file
   * Logical, coherent stream of bits on some persistent medium
4. What is a digital photo
   * It’s a file, a stream of bits
5. How you interpret bits is what gigves a meaning
6. Files are streams
   * Files can be read by your program
   * Files can be written by your program
7. Acquire, parse, filter, mine, represent, refine, interact
   * Acquire- first need to get
   * Parse
     + Splitting it up
     + Making it machine readable
     + Organizing it
     + Formatting
     + Selecting what you want
   * Mine- how to discoer code that reveal
     + Discovering that you don’t have the question to
   * Representing
     + How you represent the information
8. Buffer
9. Project 1
   * Plain text in file where all the code is
   * File reader
     + Physicaly read from disk when accessing file
   * Smaller file sizes
     + Store in memory and read fro mmemory
     + Faster
     + More performance
   * Buffers
     + Like a grocery cart that you put all your stuff in
     + Buffered reader
       - Some kind of actual file reader
       - Two step process
         * Buffer reader wraps the file reader
     + How does buffer work
     + What’s a cursor
   * After get character, normalize it
     + Normalize
       - Make lower case
       - Check if letter
   * Array and dictionary
     + Dictionary
       - Keys are character
       - Values are 0
     + Array
       - In each pats of array, stands for count
   * Pizel buffer is depicted as one dimensional array of letters
   * Exception handling