- Midterm next thursday
  - One programming code to write on paper
  - Everything else short answer
    - 6 questions plus programming roughly
  - Know values, objects, types and how they relate
    - Value is element of a set
      - Is an abstraction represented by bits in the machine
    - Elements of programing
      - Good book
    - Object is region of memory
      - That holds values and functions
    - Types of sets of values
      - Tells us how we represent the value in a computer as well
  - If you have an object and its type use interpret what it is
    - We don't always care about the bits but rather what the interpretation of the bits are
  - Code routine
    - Will remember where you are so when going back into it is does not start at beginning
    - Random num is one since it keeps moving forward every time it pushes a number out the seed is set before the program runs and it remembers where it was along the seed each time it sends a "random" number
  - Abstraction, encapsulation
    - Abstracting away form details
    - Abstraction is lifting away from details and encapsulation is locking down the details
    - Abstraction mechanism is anything that allows you to make an abstraction in the language
      - Class, struct, enum
    - Encapsulation mechanism is anything in the language that limits access
      - Const (kind of) , private (definitely)
    - Enums
      - Is a set of values
        - Has underlying set of values of ints to represent it
      - Has type safety by not allowing any outside declarations
    - Safety guard rails for a program
      - Prevents user from commenting logic errors
  - Try not to use array
    - Not regular types
    - To open and are weird
  - Assertion is for runtime error
    - Type safety is for compile time error
  - Gcc debug will compile with different standard lib to check your code more

- - - Need to write simple class
    - 10-15 lines of code
    - Define overloaded operator
- Another practice
  - Practice 4
  - Implement two version of the playing card class, which combines both standard card and jokers
    - 8 bit representation with joker
    - And the one with enums
  - Due feb 28
- Project milestone 2
  - Due feb 28
  - Create branches for refactoring
  - In event there's an enum that says all of them
    - SFML event
      - Class is a giant tagged union