Object Oriented Design Process

- Analysis
    - Domain
        - Identify entities: boats, price$
    - Function points
        - Inventory of boats where you can add, spend money on, and remove them from the inventory as well as print the inventory.
    - Scenarios
        - The Commodore of the Coconut Grove Sailing Club needs a program to track costs associated with the club's sailing and power boats, which includes managing their maintenance expenses. The program will store details for each boat, such as type, name, year of manufacture, make/model, length, purchase price, and maintenance expenses. The club's policy limits spending on maintenance to no more than the boat's purchase price. The program offers a menu with options to print the boat inventory, add or remove boats, request permission to spend on a boat (subject to the policy), or exit the program.

Design

- Classes and objects
    - Class Boat:
    - Class BoatRecords:
- Data of objects and classes
    - Boat
        - boatType: enum
        - Name: String
        - yearOfManufacture: int
        - makeModel: string
        - length: double
        - purchase price: double
        - expenses: double
    - BoatRecords:
        - fleetData: string
        - boatList: array list
        - Max_Purchase_price = double
        - Max_Length_In_Feet: double
        - FleetData: string
        - currentLine: string
        - totalPaid: double
        - totalSpent: double
        - amount: double
        - boatName: string
        - newCsv = string
        - boatName = string

- Methods of objects and classes
  - Boat
    - Constructors
    - Main method
    - getName method
    - getPurchasePrice method
    - canSpend method
    - spend method
    - getExpenses method
    - toString method
  - Boatrecords
    - Constructors
    - Main method
    - readCsv method
    - getmenuChoices method
    - printBoatInventory method
    - loadDBFileSavedData method
    - saveFleetDataDB method
    - requestPermission method
    - addBoat method
    - removeBoat method
    - exitProgram method