

Object Oriented Design Process

- Analysis
- Domain
 - Identify entities: boats, price
- Function points
 - Depicts an inventory of boats where you can add, spend money, and remove the boats from the inventory and print that inventory once completed.
- Scenario
 - 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
 - year: int
 - makeModel: String
 - length: double
 - purchasePrice: double
 - expenses: double
 - BoatRecords
 - FleetData: string
 - boatList: array list
 - MAX_PURCHASE_PRICE: double
 - MAX_LENGTH_IN_FEET: double
 - currentLine: string
 - currentLine: string
 - totalPaid: double
 - amount: double
 - boatName: string
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- Methods of Objects and Classes
 - Boat
 - Constructors
 - getName method
 - getPurchasePrice method
 - canSpend method
 - spend method
 - getRemainingBudget method
 - getExpenses method
 - BoatRecords
 - Constructors
 - Main method
 - getMenuOfChoices method
 - printInventory method
 - addBoat method
 - removeBoat method
 - requestPermission method
 - loadBoatData method