

## Adv JS

### Js OOP

1. Display the area and perimeter of an object created from using Rectangle Constructor that has width and height properties and 2 extended methods (using prototype property) for calculating area, perimeter.

Override toString() function to display a message declaring the width, height, area and perimeter of the created object.

Create Class Property that counts numbers of created objects and Class method to retrieve it.

2. Make proper updates in your previous code of generating Rectangle object that should inherit from Shape Constructor, and create your Square constructor that inherits from Rectangle. Prevent creating any object from shape, allow creation of only rectangles and square

**Bonus:** allow creation of only one square and one rectangle.

3. Create your box object that contains books objects, ensure that you can
  - count # of books inside box.
  - delete any of these books in box according to book name or type.
  - create book object and add it to box object content property
  - use toString() to tell its dimensions and how books are stored in it.
  - implement valueOf() so that if there is more than one box object we can get total books in these boxes by adding the i.e. box1 has 5 books while box2 has 2 books, box1 + box2 should return 7

### Note:

- there is no inheritance
- using of global variables, is not allowed.
- **box object has the following properties:** height, width, length,

numOfBooks, volume, material, content.

- **The content property** contains an array of books.
- **book object has the following properties:** title, numOfChapters, author, numOfPages, publisher, numOfCopies
- you can define any function needed for both box and book objects.