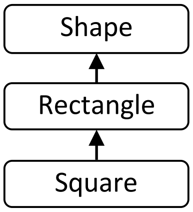
Lab 07   CSC 470-03   Spring 2016

Create a tiny object hierarchy as follows.



Classes should implement the following constructor function signatures, attributes, and methods.

Class	Constructor Function Signature	Attributes	Methods
Shape	`function(name, width, height)`	`name, width, height`	`getName()`
Rectangle	`function(name, width, height)`		`getArea()`
Square	`function(name, size)`		

Objectives

- Define custom classes.
- Set up prototype hierarchies.
- Instantiate and make use of custom classes that benefit from prototypal inheritance.

Requirements

- Create three classes: Shape, Rectangle and Square.
- Implement constructor functions with signatures as given in the table above.
- Only Shape should store `name`, `width` and `height` attributes.
- Only Shape should implement the `getName()` method.
- Only Rectangle should implement the `getArea()` method. Rectangle should inherit `getName()` from Shape.
- Square should inherit `getArea()` from Rectangle and `getName()` from Shape.
- Set up prototypal inheritance, as necessary.
- Use following tests and make sure they produce the appropriate output.

```
// Tests
var r = new Rectangle('rectangle1', 10, 20);
console.log( r.getName(), 'has area', r.getArea() );

var s = new Square('square1', 30);
console.log( s.getName(), 'has aea', s.getArea() );
```

- You MUST enter header comments in your JavaScript code including (1) your name, (3) description and or purpose of the assignment.
- You MUST comment your code, explaining what you did in each section.
- Submit JavaScript and/or HTML files using Canvas under the appropriate assignment.