

Practice with Object References

Fall 2023

Assume that the following code has been loaded (i.e. "sourced") in a browser:

```
obj =
{
  color: 'green',
  size: 'large',
  shape: 'square',
  sound: function() {
    alert('Squeak!');
  },
  contents: {
    color: 'purple',
    size: 'small',
    sound: function() {
      alert('Growl!');
    },
    siren: function() {
      alert('NeeNahNeeNah');
    }
  },
  compare: function(someObj) {
    if (someObj.color === this.color) {
      alert("Same: " + this.color);
    }
    else {
      alert("Different: " + this.color);
    }
  }
};

big_obj =
{
  contents: obj,
  color: 'blue',
  sound: function() {
    alert('Argh!');
  },
  lost: function() {
    return obj;
  }
};

small_obj = Object.create(obj);
small_obj.color = 'red';
```

What are the values of the following expressions (i.e. what you would see if you typed the expression in the console)?

1. `obj.color`
2. `obj.contents.color`
3. `big_obj.contents.color`
4. `big_obj.sound`
5. `big_obj.lost().shape`
6. `small_obj.size`
7. `small_obj.hasOwnProperty("shape")`
8. `big_obj.isPrototypeOf(obj)`

What would happen if you typed in the following statements into the console?

9. `obj.sound()`
10. `obj.contents.sound()`
11. `big_obj.lost().sound()`
12. `obj.compare(big_obj)`

Write the JavaScript statements needed to do the following:

13. Calls the function that has the alert box with 'NeeNahNeeNah'
14. Define and assign a function so that `big_obj.contents.cry()` calls an alert box with the message "Help Me!". Note that `small_obj.cry()` should call the same function.