# 04.04 Lab Exercises - SOLUTION

## array methods

1. Make a pets array containing 'cat', 'dog' and 'hamster':

```
const pets = ['cat', 'dog', 'hamster'];
console.log('pets:', pets); // ['cat', 'dog', 'hamster']
```

**array.push() adds item to end of array**

2. Push 'iguana' into the array:

```
pets.push('iguana');
console.log('pets:', pets); // ['cat', 'dog', 'hamster', 'iguana']
```

3. Push 'parrot' into the array:

```
pets.push('parrot');
console.log('pets:', pets);
// ['cat', 'dog', 'hamster', 'iguana', 'parrot']
```

4. Push 'snake' into the array:

```
pets.push('snake');
console.log('pets:', pets);
// ['cat', 'dog', 'hamster', 'iguana', 'parrot', 'snake']
```

**array.pop() removes item from end of array**

5. remove (pop) the last item, which is 'snake':

```
pets.pop(); // remove last item, which is the snake
console.log('pets:', pets);
pets.push('snake');
```

6. Put (push) back 'snake':

```
console.log('pets:', pets);
// ['cat', 'dog', 'hamster', 'iguana', 'parrot', 'snake']
let poppedPet = pets.pop();
```

7. Pop 'snake' again, but this time save it as the return value:

```
    let poppedPet = pets.pop();
    console.log('poppedPet:', poppedPet); // snake
    console.log('pets:', pets);
    // ['cat', 'dog', 'hamster', 'iguana', 'parrot']
```

**array.unshift() adds item to beginning of array**

8. Add 'bunny' to the beginning of pets array

```
    pets.unshift('bunny');
    console.log('pets:', pets);
    // ['bunny', 'cat', 'dog', 'hamster', 'iguana', 'parrot']
```

**array.shift() method removes first item of array**

9. Remove 'bunny':

```
    pets.shift();
    console.log('pets:', pets); // ['cat', 'dog', 'hamster', 'iguana',
'parrot']
```

**array1.concat(array2) combines 2 or more arrays**

10. Combine pets and morePets into the petsGalore array:

```
    const morePets = ['canary', 'gerbil', 'kitten', 'python', 'turtle'];
    const petsGalore = pets.concat(morePets);
    // combine pets and morePets into new array, petsGalore
    console.log('pets:', pets);
    console.log('morePets:', morePets);
    console.log('petsGalore:', petsGalore);
    // ['cat', 'dog', 'hamster', 'iguana', 'parrot', 'canary', 'gerbil',
'kitten', 'python', 'turtle']
```

**array.sort() from A-Z**

11. Sort the petsGalore array:

```
    petsGalore.sort();
    console.log('petsGalore sorted:', petsGalore);
```

```
    // ['canary', 'cat', 'dog', 'gerbil', 'hamster', 'iguana', 'kitten',
'parrot', 'python', 'turtle']
```

**array.splice(index, count)**

12. get rid of the first two items but save them to a var called twoSplicedPets:

```
    let twoSplicedPets = petsGalore.splice(0, 2);
    console.log('twoSplicedPets:', twoSplicedPets); // ['canary', 'cat']
    console.log('petsGalore spliced:', petsGalore);
    // ['dog', 'gerbil', 'hamster', 'iguana', 'kitten', 'parrot',
'python', 'turtle']
```

13. starting at the 4th item in petsGalore, splice 3 items in a row; save the items as threeSplicedPets:

```
    let threeSplicedPets = petsGalore.splice(3, 3);
    console.log('threeSplicedPets:', threeSplicedPets);
    // ['iguana', 'kiten', 'parrot']
    console.log('petsGalore spliced:', petsGalore);
    // ['dog', 'gerbil', 'hamster', 'python', 'turtle']
```

14. Using concat(), restore petsGalore to its original state of 10 pets and sort it from A-Z:

```
    const petsGaloreRestored = petsGalore.concat(twoSplicedPets,
threeSplicedPets).sort();
    console.log('petsGalore restored:', petsGaloreRestored);
```

15. Make a string connected by & of all items:

```
    let petsStr = petsGalore.join( ' & '); // array.join() is called on an
array and returns a string of all items
    console.log('petsStr:', petsStr);
```

**NEXT: Lesson 04.04**