Assignment 1: Array Operations
Objective: Practice adding, removing, and updating values in arrays.

1. Create an empty array called "fruits".
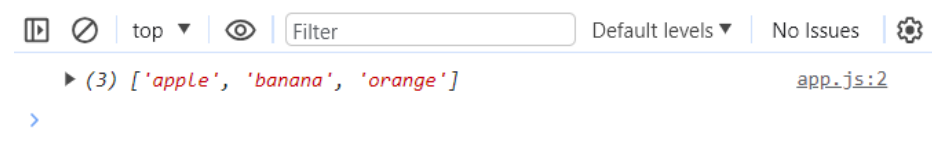**Code:** `let fruits=[ ]`

2. Add the following fruits to the "fruits" array: "apple", "banana", "orange".
Code :
```
let fruits=["apple","banana","orange"]
console.log(fruits)
```
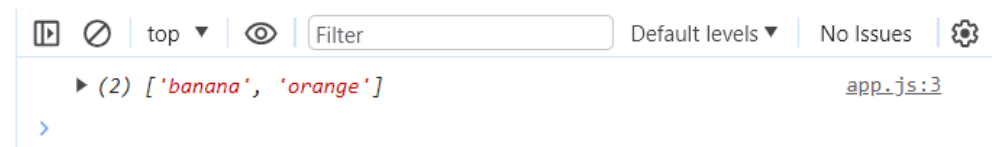
Output :

▷ ⊘	top ▼	◉	Filter		Default levels ▼	No Issues	⚙

  ▶ (3) ['apple', 'banana', 'orange']   app.js:2

>

3. Remove the first fruit from the array.
Code:
```
let fruits=["apple","banana","orange"]
fruits.splice(0,1)
console.log(fruits)
```
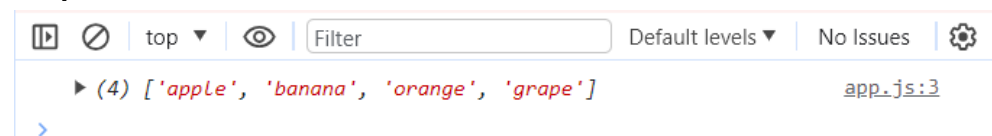
Output:

▷ ⊘	top ▼	◉	Filter		Default levels ▼	No Issues	⚙

  ▶ (2) ['banana', 'orange']   app.js:3

>

4. Add "grape" to the end of the array.
Code:
```
let fruits=["apple","banana","orange"]
fruits.push("grape")
console.log(fruits)
```

Output:

▷ ⊘	top ▼	◉	Filter		Default levels ▼	No Issues	⚙

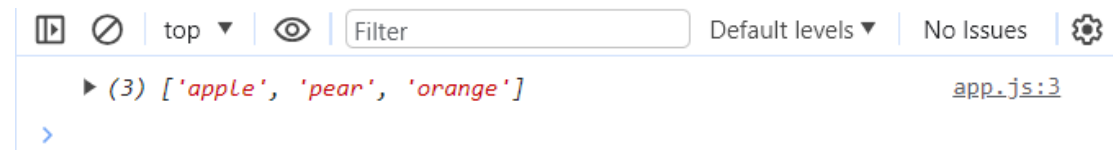 ▶ (4) ['apple', 'banana', 'orange', 'grape']   app.js:3

>

5. Update the second fruit in the array to "pear".

Code:

```
let fruits=["apple","banana","orange"]
fruits.splice(1,1,"pear")
console.log(fruits)
```

Output:

| ▶ ⊘ | top ▼ | ◉ | Filter | Default levels ▼ | No Issues | ⚙ |

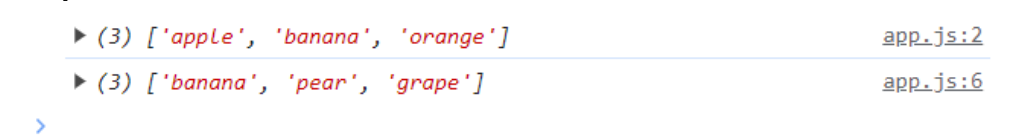▶ (3) ['apple', 'pear', 'orange']   app.js:3

>

6. Print the final "fruits" array after performing the above operations.

Code:

```
let fruits=["apple","banana","orange"]
console.log(fruits)
fruits.splice(0,1)
fruits.push("grape")
fruits.splice(1,1,"pear")
console.log(fruits)
```

Output:

▶ (3) ['apple', 'banana', 'orange']   app.js:2
▶ (3) ['banana', 'pear', 'grape']   app.js:6

>

Assignment 2: Object Operations
Objective: Practice adding, removing, and updating values in objects.

1. Create an empty object called "person".
Code: `let person={ }`
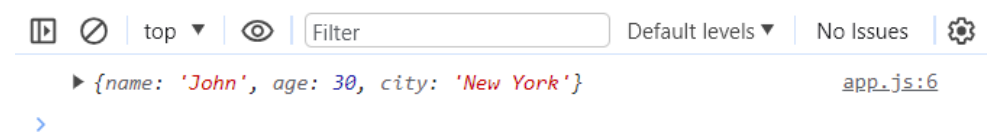
2. Add the following properties to the "person" object:
   - name: "John"
   - age: 30
   - city: "New York"

Code:

```
let person={
        name:"John",
        age: 30,
        city: "New York"
}
console.log(person)
```

Output:

```
▣ ⊘ | top ▾ | ⊙ | Filter          Default levels ▾   No Issues  ⚙

   ▶ {name: 'John', age: 30, city: 'New York'}                app.js:6
 >
```
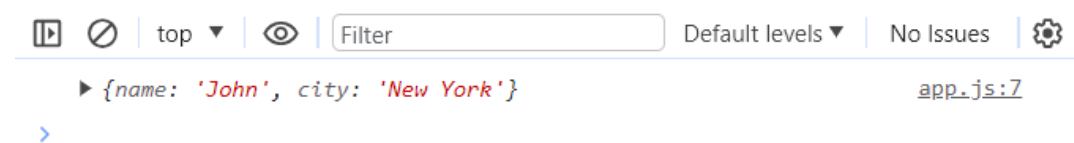
3. Remove the "age" property from the "person" object.
Code:

```
let person={
        name:"John",
        age: 30,
        city: "New York"
}
delete person.age
console.log(person)
```
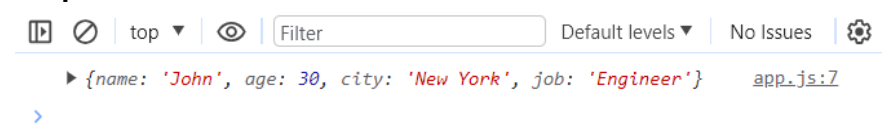
Output:

```
▣ ⊘ | top ▾ | ⊙ | Filter          Default levels ▾   No Issues  ⚙

   ▶ {name: 'John', city: 'New York'}                app.js:7
 >
```

4. Add a new property called "job" with the value "Engineer" to the "person" object.

Code:

```
let person={
        name:"John",
        age: 30,
        city: "New York"
}
person.job="Engineer"
console.log(person)
```

Output:

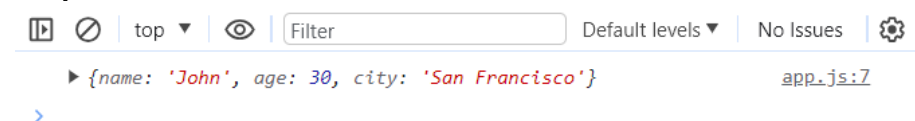| ▶ ⊘ | top ▼ | ◉ | Filter | | Default levels ▼ | No Issues | ⚙ |

> ▶ {name: 'John', age: 30, city: 'New York', job: 'Engineer'}   app.js:7

>

5. Update the "city" property of the "person" object to "San Francisco".

Code:

```
let person={
        name:"John",
        age: 30,
        city: "New York"
}
person.city="San Francisco"
console.log(person)
```

Output:

| ▶ ⊘ | top ▼ | ◉ | Filter | | Default levels ▼ | No Issues | ⚙ |

> ▶ {name: 'John', age: 30, city: 'San Francisco'}   app.js:7

>

6. Print the final "person" object after performing the above operations.

Code:

```
let person={
        name:"John",
        age: 30,
        city: "New York"
}
console.log(person)
delete person.age
person.job="Engineer"
person.city="San Francisco"
console.log(person)
```

Output:

```
▶ {name: 'John', age: 30, city: 'New York'}              app.js:6
▶ {name: 'John', city: 'San Francisco', job: 'Engineer'}  app.js:10
>
```

Assignment 3: Array of Objects Operations

Objective: Practice adding, removing, and updating values in an array of objects.

1. Create an empty array called "cars".
Code: `let cars=[ ]`

2. Add three car objects to the "cars" array. Each car object should have the following properties:
   - make: "Toyota"
   - model: "Camry"
   - year: 2018

Code:

```
let cars=[
    {make:"Toyota",model:"Camry",year:2018},
    {make:"Toyota",model:"Camry",year:2018},
    {make:"Toyota",model:"Camry",year:2018}
]
console.log(cars)
```
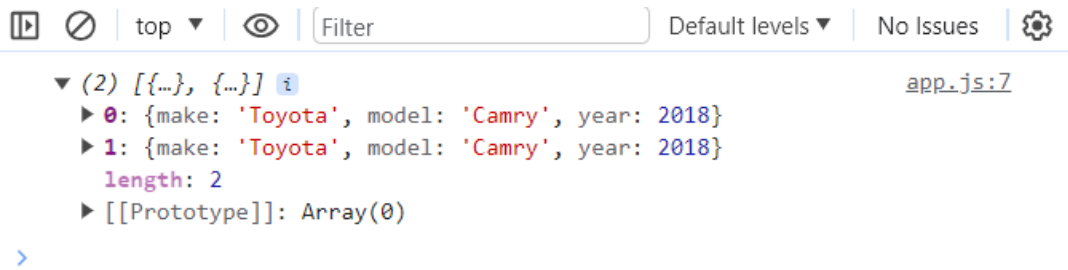
Output:

```
▣ ⊘ | top ▼ | ◉ | Filter          | Default levels ▼ | No Issues | ⚙

  ▼ (3) [{…}, {…}, {…}] ⓘ                              app.js:6
    ▶ 0: {make: 'Toyota', model: 'Camry', year: 2018}
    ▶ 1: {make: 'Toyota', model: 'Camry', year: 2018}
    ▶ 2: {make: 'Toyota', model: 'Camry', year: 2018}
      length: 3
    ▶ [[Prototype]]: Array(0)
>
```

3. Remove the first car object from the "cars" array.
Code:

```
let cars=[
    {make:"Toyota",model:"Camry",year:2018},
    {make:"Toyota",model:"Camry",year:2018},
    {make:"Toyota",model:"Camry",year:2018}
]
cars.splice(0,1)
console.log(cars)
```
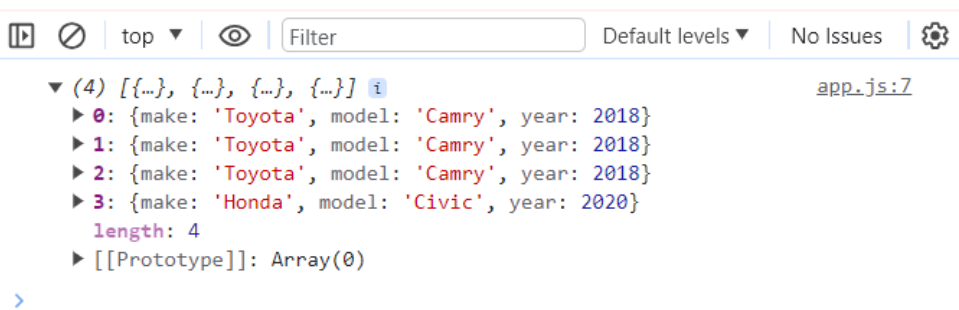
Output:

```
        top ▼    ◎   Filter              Default levels ▼   No Issues   ⚙
   ▼ (2) [{…}, {…}] ⓘ                                          app.js:7
     ▶ 0: {make: 'Toyota', model: 'Camry', year: 2018}
     ▶ 1: {make: 'Toyota', model: 'Camry', year: 2018}
       length: 2
     ▶ [[Prototype]]: Array(0)

   >
```

4. Add a new car object to the "cars" array with the following properties:
   - make: "Honda"
   - model: "Civic"
   - year: 2020

Code:

```javascript
let cars=[
    {make:"Toyota",model:"Camry",year:2018},
    {make:"Toyota",model:"Camry",year:2018},
    {make:"Toyota",model:"Camry",year:2018}
]
cars.push({make:"Honda",model:"Civic",year:2020})
console.log(cars)
```
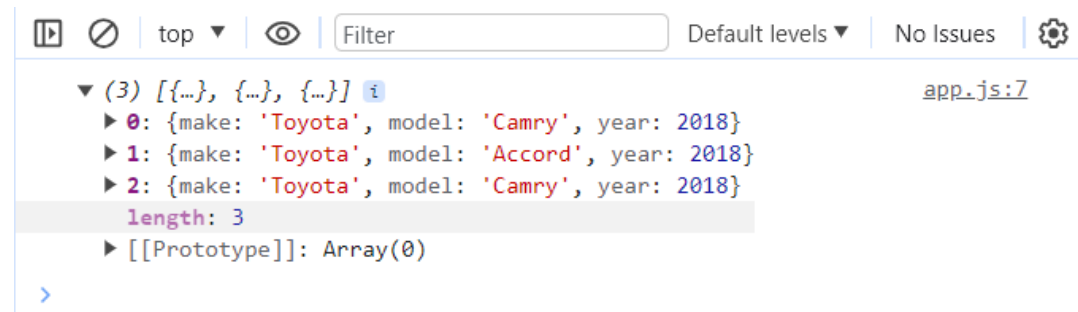
Output:

```
        top ▼    ◎   Filter              Default levels ▼   No Issues   ⚙
   ▼ (4) [{…}, {…}, {…}, {…}] ⓘ                               app.js:7
     ▶ 0: {make: 'Toyota', model: 'Camry', year: 2018}
     ▶ 1: {make: 'Toyota', model: 'Camry', year: 2018}
     ▶ 2: {make: 'Toyota', model: 'Camry', year: 2018}
     ▶ 3: {make: 'Honda', model: 'Civic', year: 2020}
       length: 4
     ▶ [[Prototype]]: Array(0)

   >
```

5. Update the "model" property of the second car object in the array to "Accord".

Code:

```javascript
let cars=[
    {make:"Toyota",model:"Camry",year:2018},
    {make:"Toyota",model:"Camry",year:2018},
    {make:"Toyota",model:"Camry",year:2018}
]
cars[1].model="Accord"
console.log(cars)
```

Output:

```
▯ ⊘  top ▼  ◎  Filter                    Default levels ▼   No Issues  ⚙

   ▼ (3) [{…}, {…}, {…}] ⓘ                           app.js:7
     ▶ 0: {make: 'Toyota', model: 'Camry', year: 2018}
     ▶ 1: {make: 'Toyota', model: 'Accord', year: 2018}
     ▶ 2: {make: 'Toyota', model: 'Camry', year: 2018}
       length: 3
     ▶ [[Prototype]]: Array(0)

   >
```
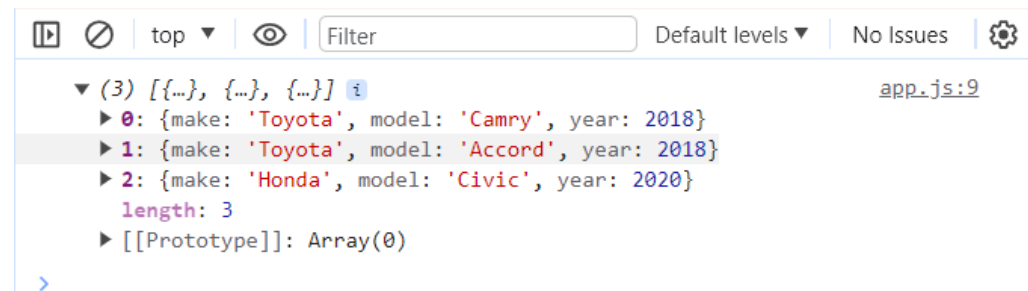
6. Print the final "cars" array after performing the above operations.

Code:
```js
let cars=[
    {make:"Toyota",model:"Camry",year:2018},
    {make:"Toyota",model:"Camry",year:2018},
    {make:"Toyota",model:"Camry",year:2018}
]
cars.splice(0,1)
cars.push({make:"Honda",model:"Civic",year:2020})
cars[1].model="Accord"
console.log(cars)
```

Output:

```
▯ ⊘  top ▼  ◎  Filter                    Default levels ▼   No Issues  ⚙

   ▼ (3) [{…}, {…}, {…}] ⓘ                           app.js:9
     ▶ 0: {make: 'Toyota', model: 'Camry', year: 2018}
     ▶ 1: {make: 'Toyota', model: 'Accord', year: 2018}
     ▶ 2: {make: 'Honda', model: 'Civic', year: 2020}
       length: 3
     ▶ [[Prototype]]: Array(0)

   >
```