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Session 4 Homework

Code For Everyone JavaScript

Study

1. `for` and Object

   Run the following code, observe and then answer the questions

```
const product = {
    name: 'Xiaomi rice cooker',
    price: 1700,
    brand: 'Xiaomi',
    color: 'white'
};

for (let x in product) {
    console.log(x);
}
```

   Questions:

   1.1. What does `x` receives from `product`, property or value?
   1.2. Use the for loop to print/log out the following output

```
name: Xiaomi rice cooker
price: 1700
brand: Xiaomi
color: White
```

2. Learn about destructuring object in the following tutorials:

   Object destructuring in ES6
   ES6 destructuring: the complete guide

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Then use one line of code to destructure to obtain `subject`, `dueDate` and `assignTo` from this object:

```
const task = {
    subject: 'Implement login feature',
    createdBy: 'Hoang Ngoc Duc',
    assignTo: 'Nguyen Phuong Nam',
    dueDate: '2019-10-08T18:00:24+0000',
    expectedHours: 0.5,
};
```

3. Here is the actual data from a job search site, copy all of the data, assign it to a variable or a constant named `jobSearch` in your code. Log or print it out to see its structure then answer the following questions:
    3.1. What is the data type of the **outermost layer** (`Number`, `String`, `Object`, `Array` or else)?
    3.2. The `hits` property is where the job results are stored, is it a `Number`, `String`, `Array`, `Object` or something else?
    3.3. In each hit of `hits`, how to find the job's title, locations, salary, benefits, skills and requirements

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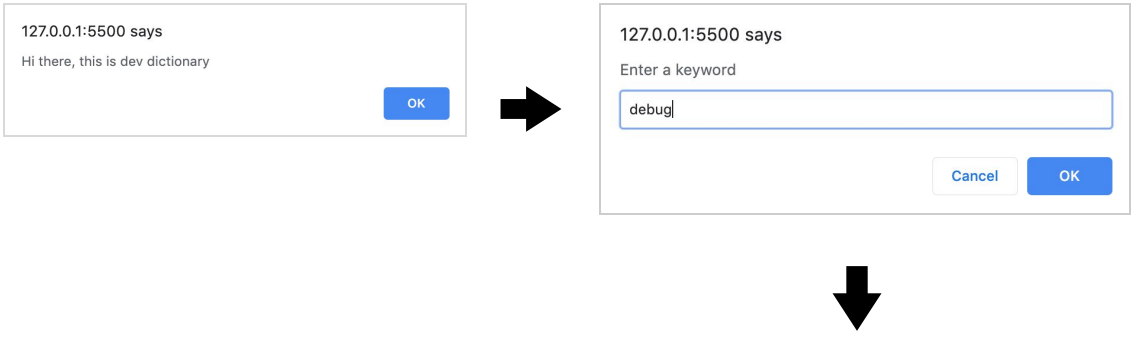
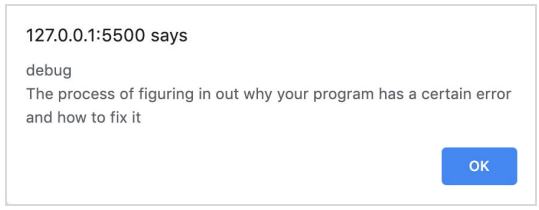
Review

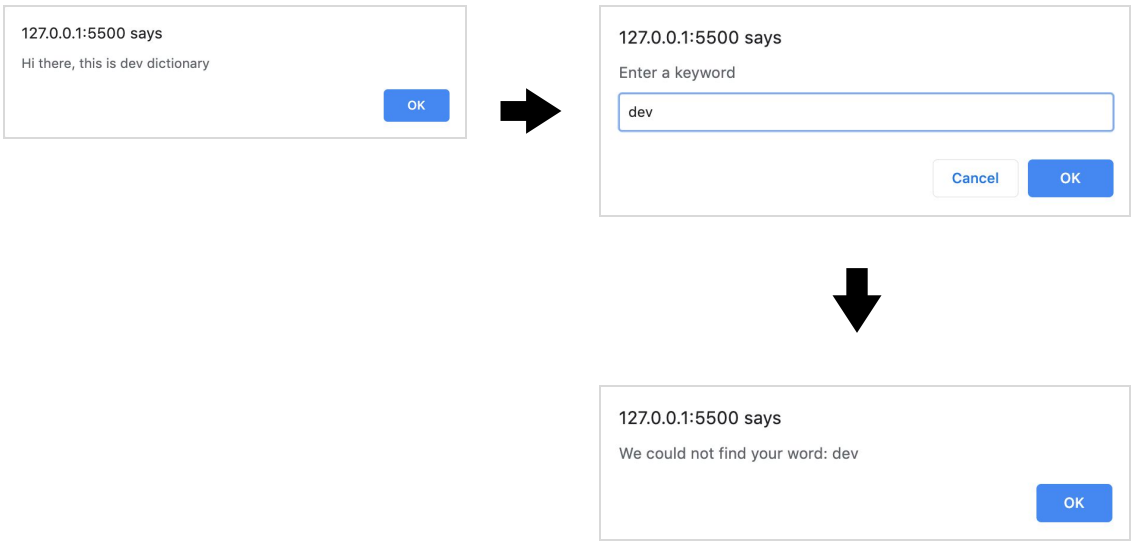
4. Initialize an object to represent a dictionary, with properties as keyword and values as explanation, the initial values are from this table

Keyword	**Explanation**
debug	The process of figuring out why your program has a certain error and how to fix it
done	When your task is complete, the only thing you have to do is to wait for users to use it (no additional codes or actions needed)
defect	The formal word for ‘error’
pm	The short version of Project Manager, the person in charge of the final result of a project
ui/ux	UI means User Interface, UX mean User Experience, are the process to define how your products looks and feels

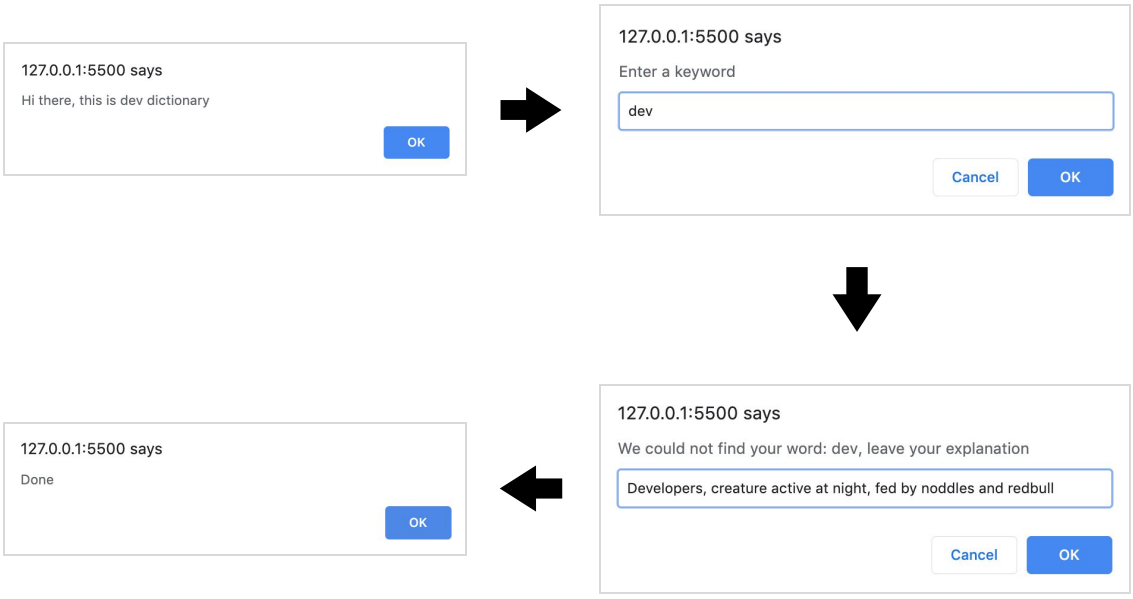
4.1. Write a script to simulate the lookup of the dictionary initialized in the previous example







4.2. Update your script so that it can let users contribute the explanation to the dictionary

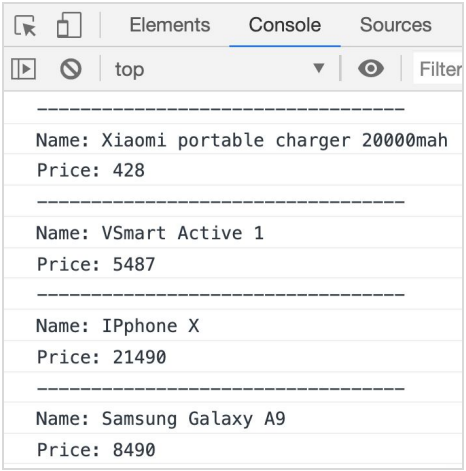


Note: If you want, you and handle the exceptions from user input, especially when users leave their explanation blank when the word is not found.

5. Initialize a variable named products, containing an array of products, each product has a `name`, `price`, `brand`, `category`, and `color`

#	Name	Brand	Price	Color	Category
1	Xiaomi portable charger 20000mah	Xiaomi	428	White	Charger
2	VSmart Active 1	VSmart	5487	Black	Phone
3	IPhone X	Apple	21490	Gray	Phone
4	Samsung Galaxy A9	Samsung	8490	Blue	Phone

5.1. Print/log `name` and `price` of all the products out



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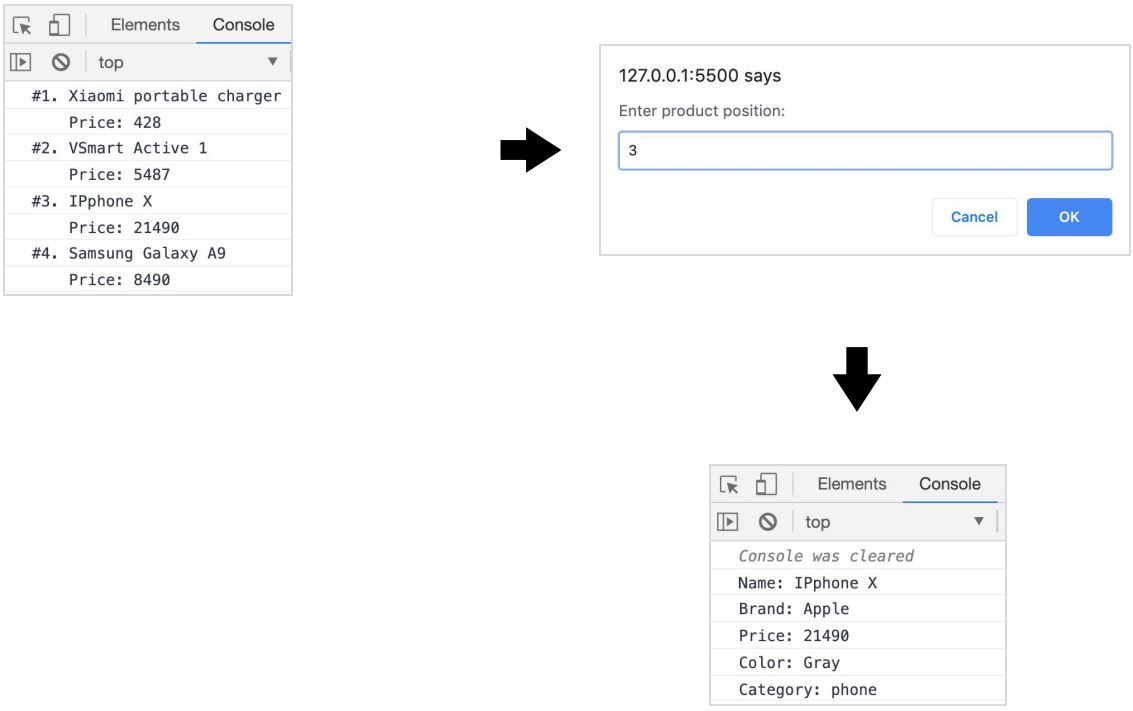
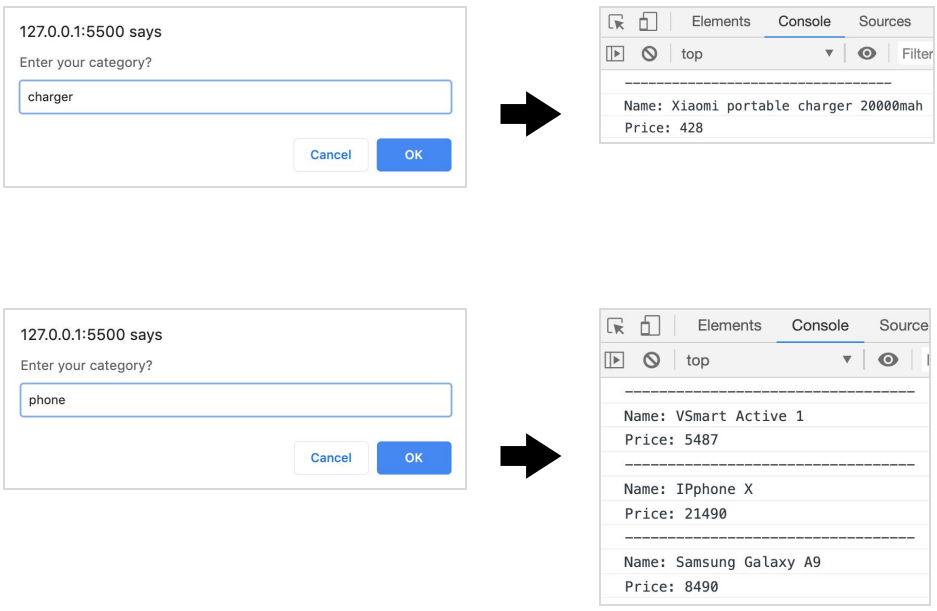
5.2. Write a script printing/logging out the products with their number, then print/logging out the details of a product with its position entered by users



5.3. Write a script printing/logging out the products based on category input by users



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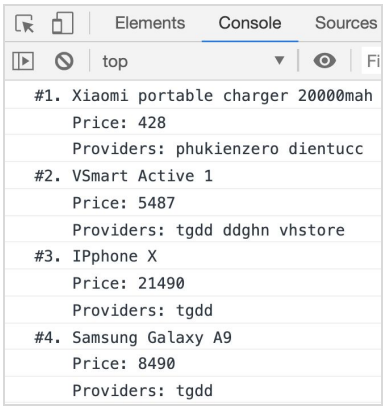
5.4. Add providers to each product

#	Name	Brand	Price	Color	Category	Providers
1	Xiaomi portable charger 20000mah	Xiaomi	428	White	Charger	Phukienzero Dientuccc
2	VSmart Active 1	VSmart	5487	Black	Phone	Tgdd Ddghn VhStore
3	IPhone X	Apple	21490	Gray	Phone	Tgdd
4	Samsung Galaxy A9	Samsung	8490	Blue	Phone	Tgdd

And printing/logging out all of the products



5.5. (Optional) Search the `products` based on the wanted `provider` entered by users, if you need more directions, find the hints at the end of this homework

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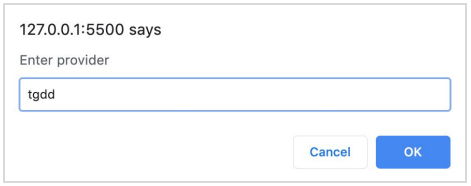

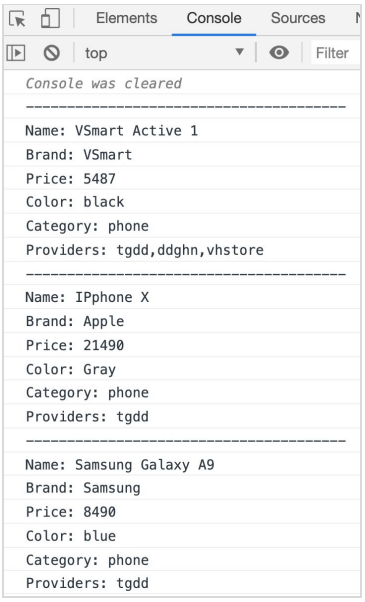

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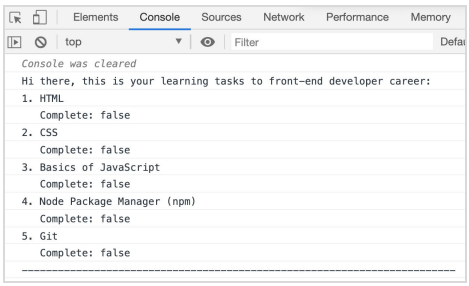
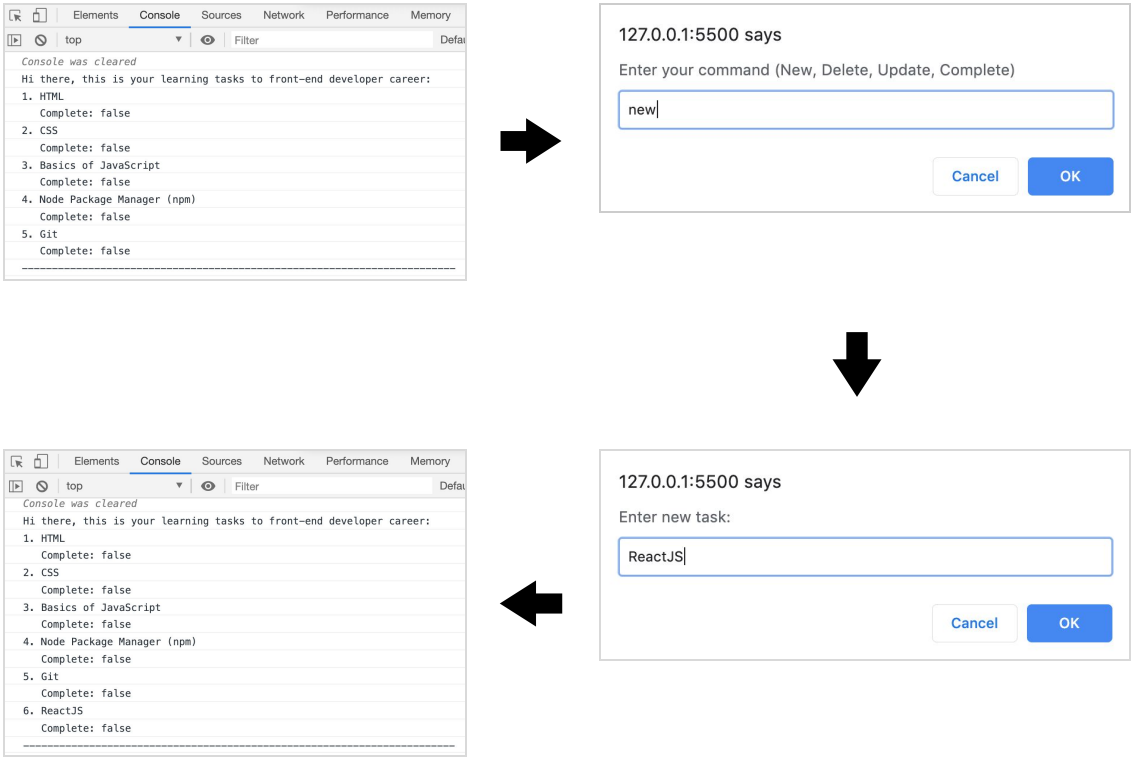
Serious exercices

6. Write a script to store and process the learning tasks to become a front-end developer

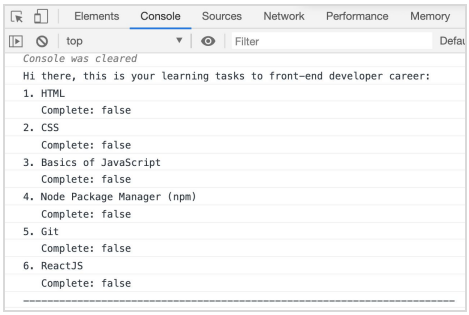
6.1. Print it out

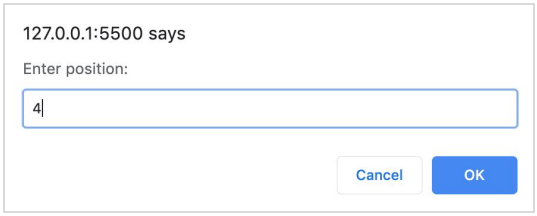


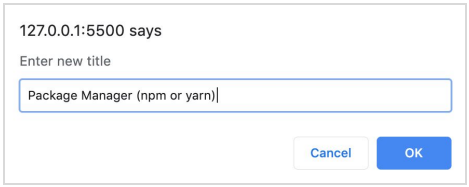
6.2. Let users add new task

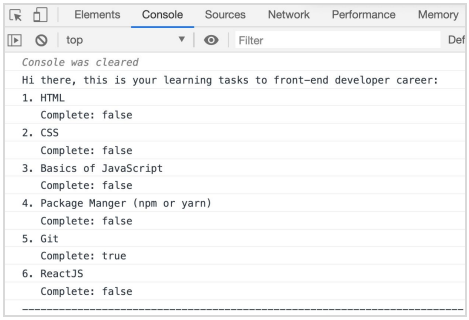


6.3. Let users update task

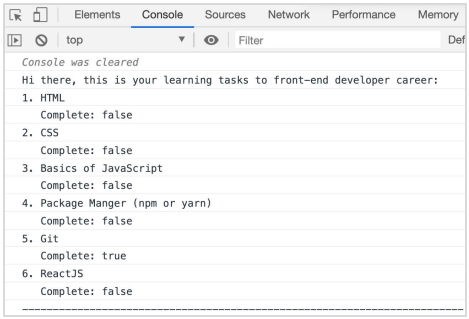


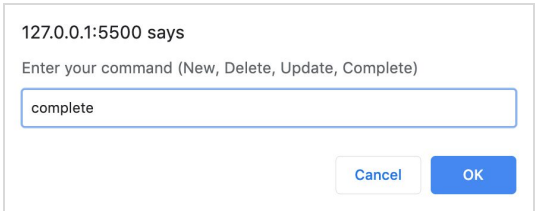






6.4. Let users complete task





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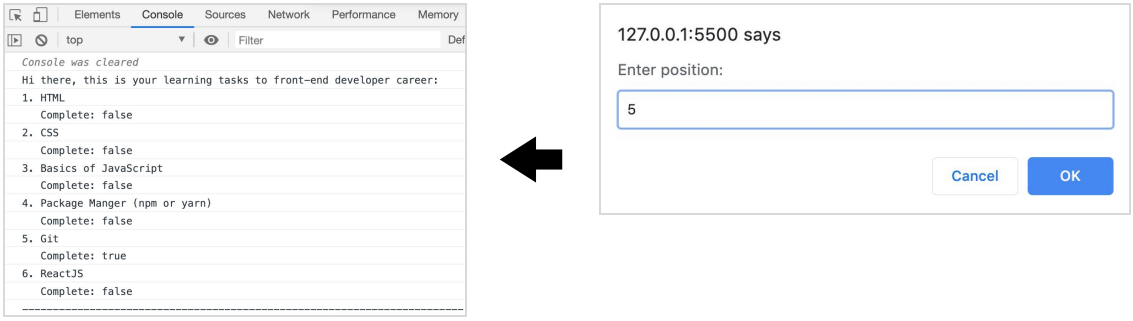
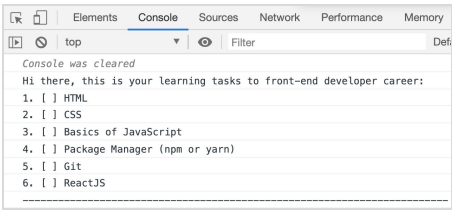
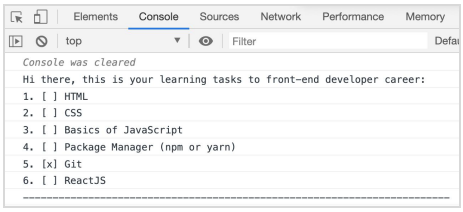


6.5. Let users delete task (No illustrative image, you already know the drill)

6.6. (Optional) Make printing / logging better



and



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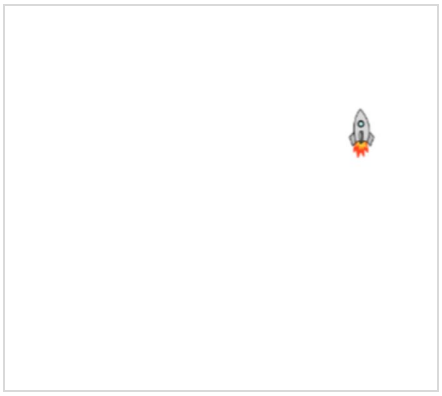
Turtle exercices

7. Given the object

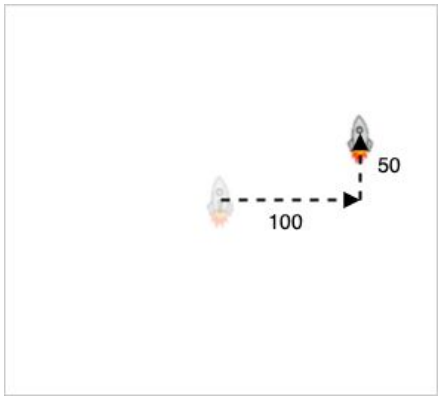
```
const pos = {
    x: 200,
    y: 50,
}
```

Move the turtle to the provided position, use `penup()` and `pendown()` to NOT leave any traces

Actual result



Hint

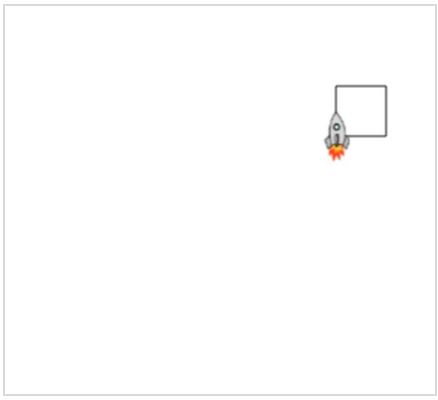


8. Given the object

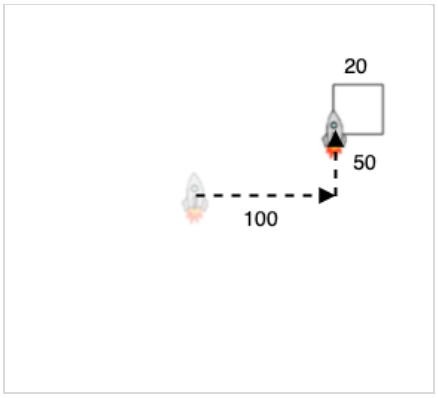
```
const square = {
    x: 100,
    y: 50,
    width: 20,
};
```

Use JS Turtle, to draw a square at position (`x`, `y`) with size `width`

Actual result



Hint

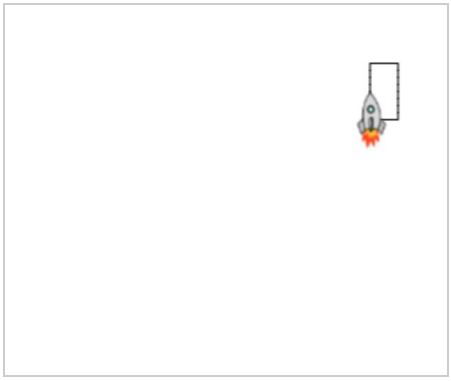


9. Given the object

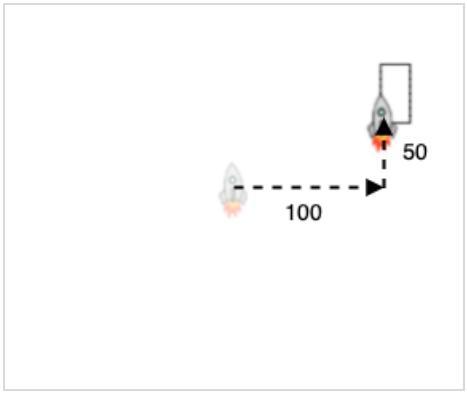
```
const rect = {
    x: 100,
    y: 50,
    width: 20,
    height: 40,
};
```

Use JS Turtle, to draw a rectangle at position (`x`, `y`) with size `width` and `height`

Actual result



Hint



10. Given this data structure, in which:

```
{
  shape: 'rect',
  x: 8,
  y: 70,
```

```
    width: 12,
    height: 40,
}
```

`rect` means draw a rectangle with the respective position (`x`, `y`) and size (`width`, `height`)

```
{
  shape: 'square',
  x: 20,
  y: 40,
  width: 50,
 },
```

`square` means draw a square with the respective position (`x`, `y`) and size (`width`)

Go through and execute all command.

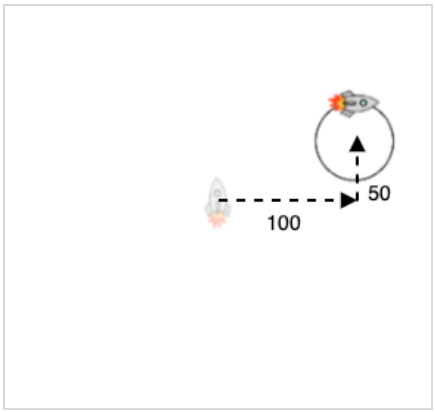
Note: To make turtle go to the initial position with initial angle, use `home()` statements.

11. (Optional) Add circle to the command

```
const circle = {
   shape: 'circle',
   x: 100,
   y: 50,
   radius: 30,
};
```

Actual result

Hint



12. (Optional) Execute all command from this

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Tools

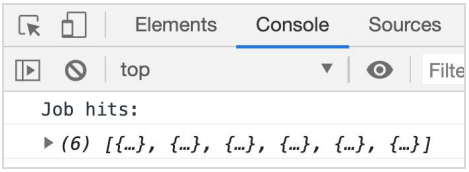
13. Sometimes, you are given a very large object, which is hard to read, this for example. It can be made much more readable if you using prettify / format tool, like this Chrome Extension. Install it, reload the example and see the results. Learn how to switch between raw mode and parsed mode at the top right corner of the extension. Submit your screenshots to demonstrate your usage

14. Large objects are hard to read thus hard to analyze. To overcome this, you can log/print the object to the console, or you can use some online tools to analyze it better. JSON Editor Online is one of these. Learn how to use it (Just copy your data to the left panel of the Editor, press the ▸ button and see the result at the right panel). Submit your screenshots to demonstrate your understanding

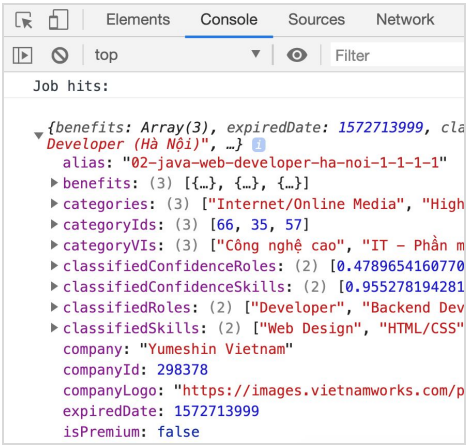
Nice-to-do

15. (Optional) Get jobs data from this link, copy the whole content and assign it a variable or a constant named `jobData`

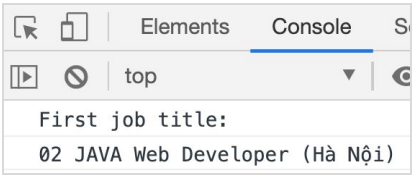
15.1. Get all the job hits



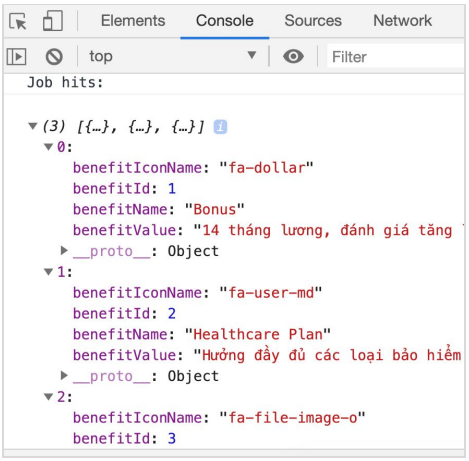
15.2. Get the first job hit



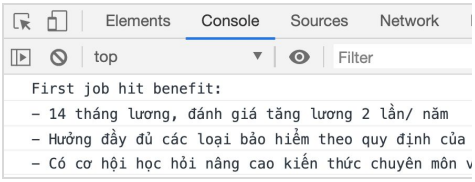
15.3. Get `jobTitle` of the first job



15.4. Get the `benefits` of the first job hit

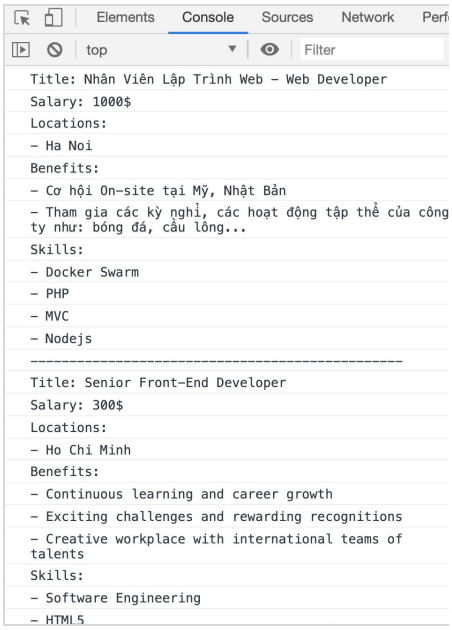


15.5. Log out first job hit benefit values



15.6. Log out `jobTitle` and `benefitValue` of all job `hits`

15.7. Log out `jobTitle`, `locations`, `skills`, `jobSalary` of all job `hits`

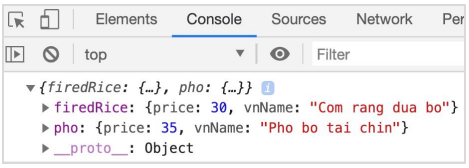


16. (Optional) There are at least two ways to delete a property-value pair from an object, the first one is the one you learned in class, to use `delete` keyword (which you already learned).. The second one is to create a new object without the property-value pair and just use the new object from then. For example:

```
const oldData = {
      firedRice: {
          Price: 30,
          vnName: 'Com rang dua bo'
      },
      noddle: {
          price: 20,
          vnName: 'My tom chanh'
      },
      pho: {
          price: 35,
          vnName: 'Pho bo tai chin'
      },
};
```

If noddle removal is needed, a new object named `newData` is created containing data from `oldData` object, without `noddle` property. This gives the benefit of preserving the old data so it can be traced back when debugging in the future.

```
console.log(newData);
// Console
```



This can be done elegantly using JS 6 `rest` operator, learn it and write an example to demonstrate your understanding. If you need hints, find them at the end of this homework

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Hints

Review

5.5. After getting category from users, loop through all of the products, with each product, get respective providers and check whether the user-entered category is in the providers array (the quick way is to use `Array indexOf` function then check whether the result equals -1 or not), if so, print/log out the results