

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](#)

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



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

127.0.0.1:5500 says

Hi there, this is dev dictionary

OK

➔

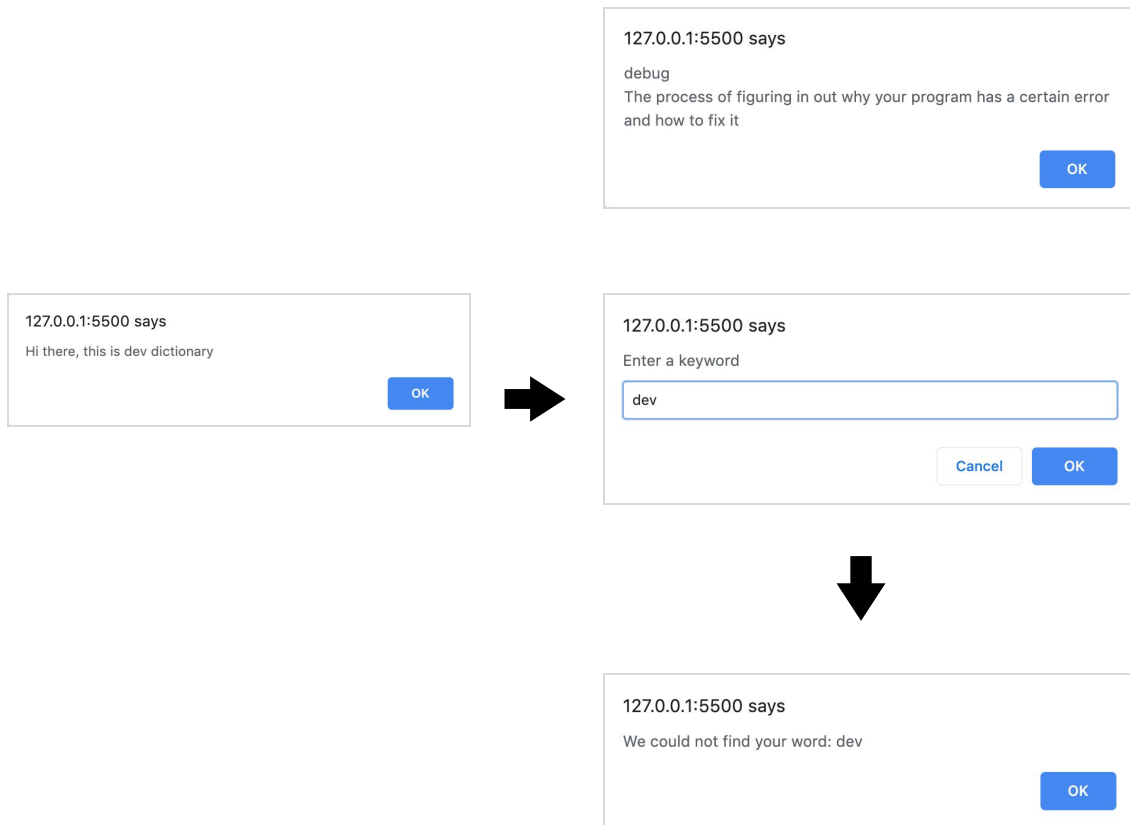
127.0.0.1:5500 says

Enter a keyword

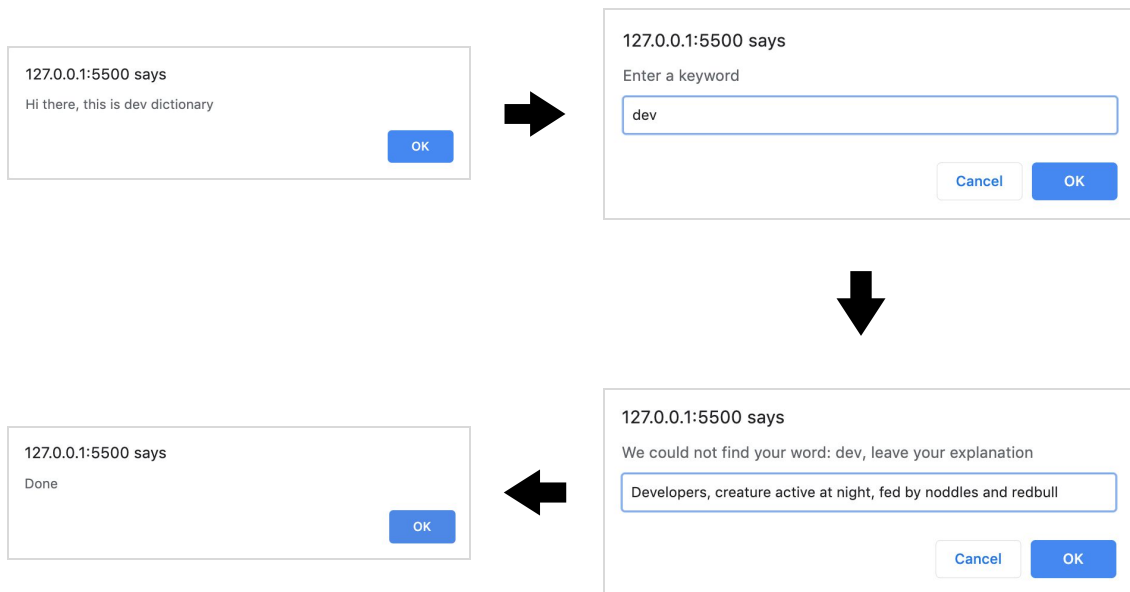
debug

Cancel OK





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





127.0.0.1:5500 says

Enter a keyword

Cancel OK



127.0.0.1:5500 says

dev
Developers, creature active at night, fed by noddies and redbull

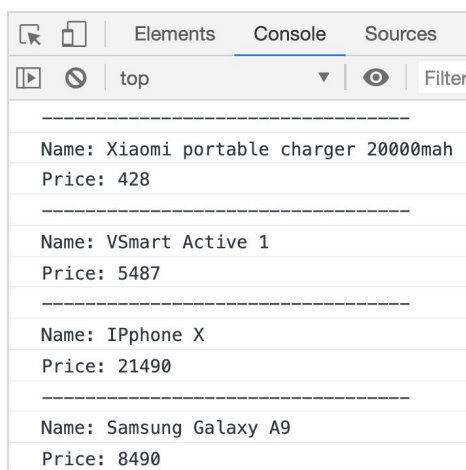
OK

Note: If you want, you can 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



- 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

Elements	Console
top	
#1. Xiaomi portable charger	
Price: 428	
#2. VSmart Active 1	
Price: 5487	
#3. IPphone X	
Price: 21490	
#4. Samsung Galaxy A9	
Price: 8490	



127.0.0.1:5500 says

Enter product position:

Cancel OK



Elements	Console
top	
	Console was cleared
	Name: IPphone X
	Brand: Apple
	Price: 21490
	Color: Gray
	Category: phone

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

127.0.0.1:5500 says

Enter your category?

Cancel OK



Elements	Console	Sources
top		
	Name: Xiaomi portable charger 20000mah	
	Price: 428	

127.0.0.1:5500 says

Enter your category?

Cancel OK

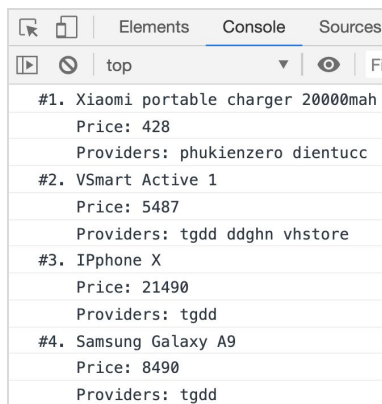


Elements	Console	Source
top		
	Name: VSmart Active 1	
	Price: 5487	
	Name: IPphone X	
	Price: 21490	
	Name: Samsung Galaxy A9	
	Price: 8490	

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



#	Name	Brand	Price	Color	Category	Providers
#1.	Xiaomi portable charger 20000mah		Price: 428			Providers: phukienzero dientucc
#2.	VSmart Active 1		Price: 5487			Providers: tgdd ddghn vhstore
#3.	IPhone X		Price: 21490			Providers: tgdd
#4.	Samsung Galaxy A9		Price: 8490			Providers: tgdd

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

127.0.0.1:5500 says

Enter provider



Elements	Console	Sources
top		
Console was cleared		

Name: VSmart Active 1		
Brand: VSmart		
Price: 5487		
Color: black		
Category: phone		
Providers: tgdd, ddghn, vhstore		

Name: IPphone X		
Brand: Apple		
Price: 21490		
Color: Gray		
Category: phone		
Providers: tgdd		

Name: Samsung Galaxy A9		
Brand: Samsung		
Price: 8490		
Color: blue		
Category: phone		
Providers: tgdd		



Serious exercises

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

```
Console was cleared
Hi there, this is your learning tasks to front-end developer career:
1. HTML
  Complete: false
2. CSS
  Complete: false
3. Basics of JavaScript
  Complete: false
4. Node Package Manager (npm)
  Complete: false
5. Git
  Complete: false
```

- 6.2. Let users add new task

```
Console was cleared
Hi there, this is your learning tasks to front-end developer career:
1. HTML
  Complete: false
2. CSS
  Complete: false
3. Basics of JavaScript
  Complete: false
4. Node Package Manager (npm)
  Complete: false
5. Git
  Complete: false
```



127.0.0.1:5500 says

Enter your command (New, Delete, Update, Complete)



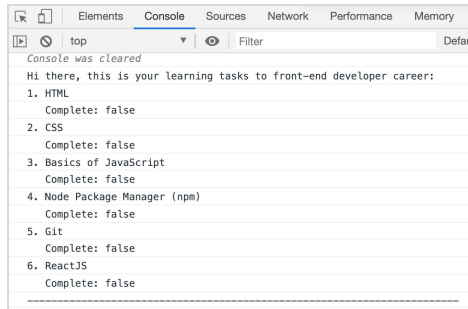
```
Console was cleared
Hi there, this is your learning tasks to front-end developer career:
1. HTML
  Complete: false
2. CSS
  Complete: false
3. Basics of JavaScript
  Complete: false
4. Node Package Manager (npm)
  Complete: false
5. Git
  Complete: false
6. ReactJS
  Complete: false
```



127.0.0.1:5500 says

Enter new task:

- 6.3. Let users update task



127.0.0.1:5500 says

Enter your command (New, Delete, Update, Complete)



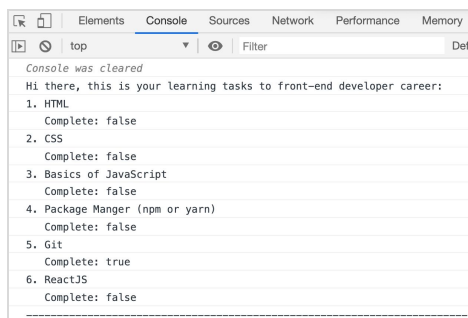
127.0.0.1:5500 says

Enter position:

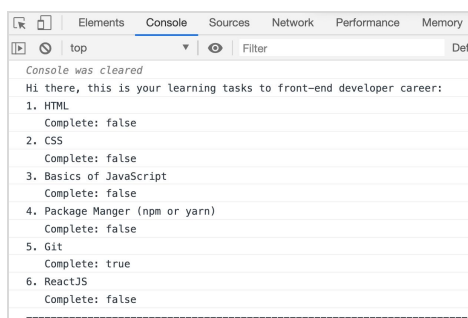


127.0.0.1:5500 says

Enter new title

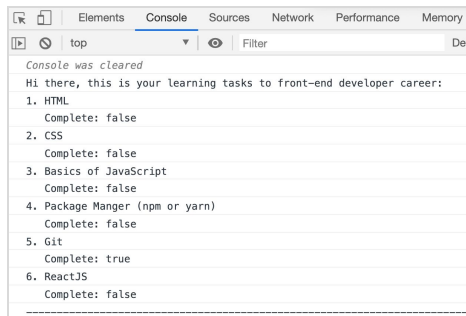


6.4. Let users complete task



127.0.0.1:5500 says

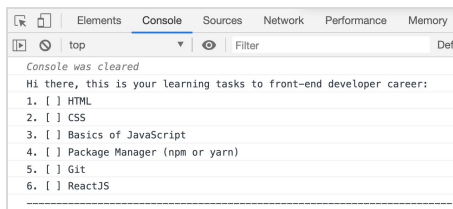
Enter your command (New, Delete, Update, Complete)



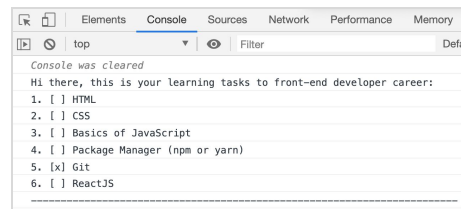
127.0.0.1:5500 says

Enter position:

- 6.5. Let users delete task (No illustrative image, you already know the drill)
- 6.6. (Optional) Make printing / logging better



and





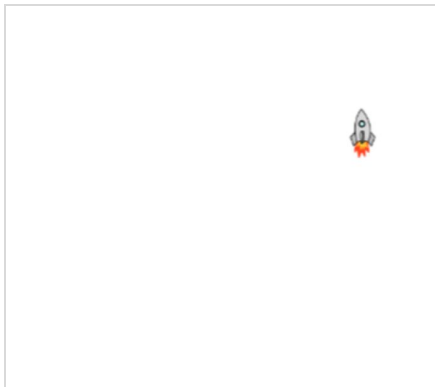
Turtle exercises

7. Given the object

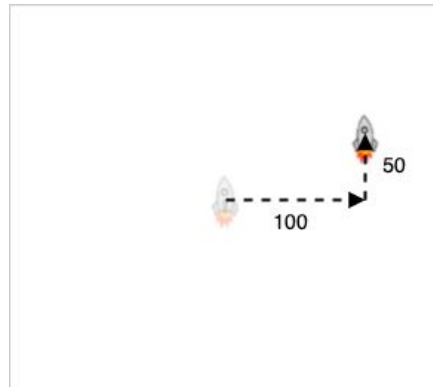
```
const pos = {  
  x: 200,  
  y: 50,  
}
```

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

Actual result



Hint

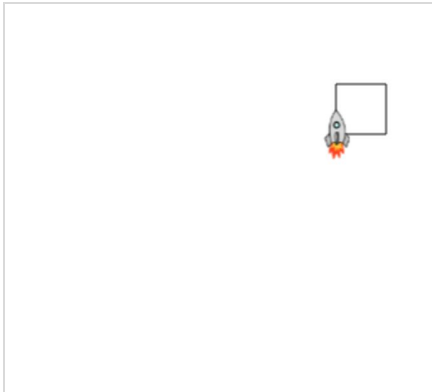


8. Given the object

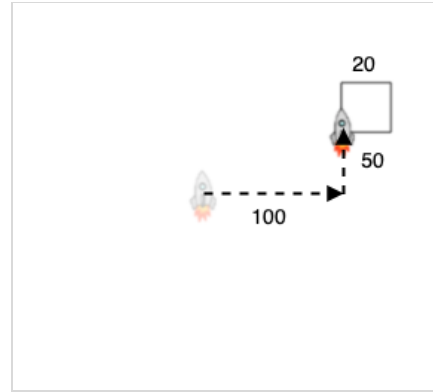
```
const square = {  
  x: 100,  
  y: 50,  
  width: 20,  
};
```

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

Actual result



Hint

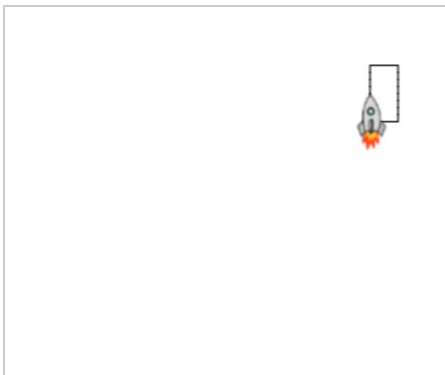


9. Given the object

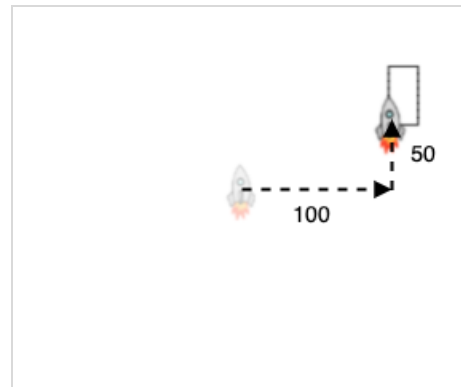
```
const rect = {
  x: 100,
  y: 50,
  width: 20,
  height: 40,
};
```

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)

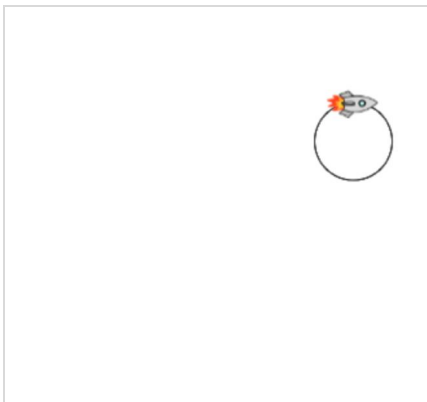
Go through and execute all command.

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

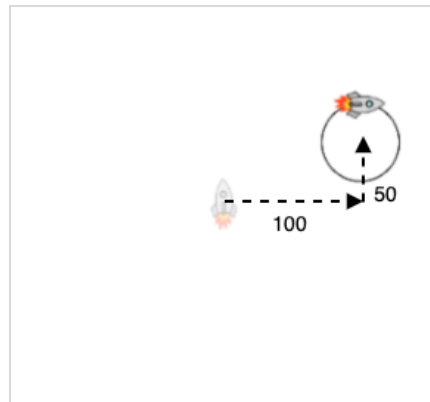
11. (Optional) Add circle to the command

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

Actual result



Hint



12. (Optional) Execute all command from [this](#)



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



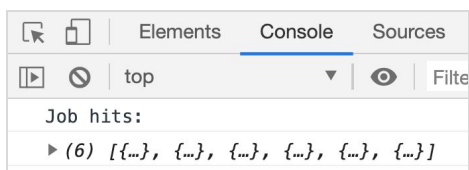
14. Large objects are hard to read thus hard to analyze. To overcome this, you can log/print the object to the console, or you can use some online tools to analyze it better. [JSON Editor Online](#) is one of these. Learn how to use it (Just copy your data to the left panel of the Editor, press the ►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



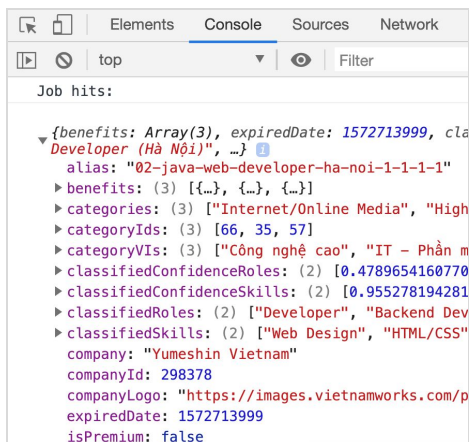
Nice-to-do

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

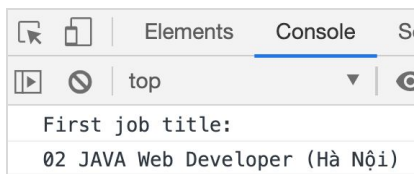
15.1. Get all the job hits



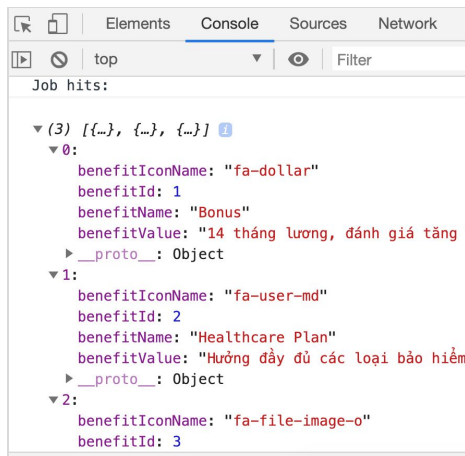
15.2. Get the first job hit



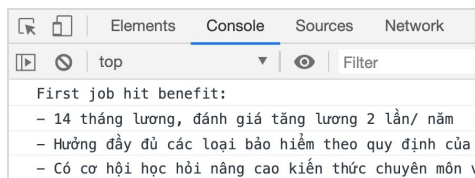
15.3. Get jobTitle of the first job



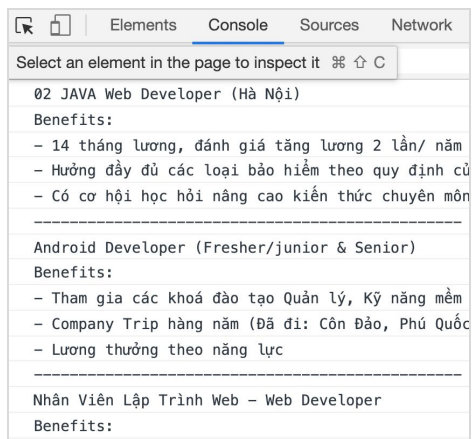
15.4. Get the benefits of the first job hit



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

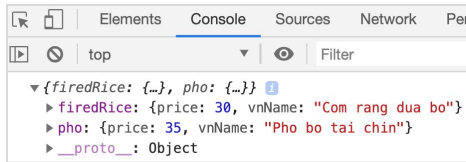
Elements	Console	Sources	Network	Perf
top	Filter			
Title: Nhân Viên Lập Trình Web – Web Developer				
Salary: 1000\$				
Locations:				
– Ha Noi				
Benefits:				
– Cơ hội On-site tại Mỹ, Nhật Bản				
– Tham gia các Kỳ nghỉ, các hoạt động tập thể của công ty như: bóng đá, cầu lông...				
Skills:				
– Docker Swarm				
– PHP				
– MVC				
– Nodejs				
=====				
Title: Senior Front-End Developer				
Salary: 3000\$				
Locations:				
– Ho Chi Minh				
Benefits:				
– Continuous learning and career growth				
– Exciting challenges and rewarding recognitions				
– Creative workplace with international teams of talents				
Skills:				
– Software Engineering				
– HTML5				

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:

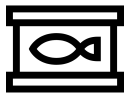
```
const oldData = {
  firedRice: {
    Price: 30,
    vnName: 'Com rang dua bo'
  },
  noddle: {
    price: 20,
    vnName: 'My tom chanh'
  },
  pho: {
    price: 35,
    vnName: 'Pho bo tai chin'
  },
};
```

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



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