

Lab: JS Fundamentals

Lab problems for the ["Back-End Technologies Basics"](#) Course @ SoftUni.

You can check your solutions in [Judge](#).

1. Even and Odd Subtraction

Write a program that calculates the **difference** between the sum of the **even** and the sum of the **odd** numbers in an array.

Examples

Input	Output	Comments
[1,2,3,4,5,6]	3	$2 + 4 + 6 = 12$, $1 + 3 + 5 = 9$, $12 - 9 = 3$
[3,5,7,9]	-24	
[2,4,6,8,10]	30	

2. Substring

Write a function that **receives a string** and **two numbers**. The numbers will be a **starting index** and **count** of elements to substring. Print the result.

Input / Output

Input	Output
'ASentence', 1, 8	Sentence
'SkipWord', 4, 7	Word

3. Censored Words

Write a function that **receives a text** as a first parameter and a **single word** as a second. Find **all occurrences** of that word in the text and replace them with the corresponding count of '*'.

Input / Output

Input	Output
'A small sentence with some words', 'small'	A ***** sentence with some words
'Find the hidden word', 'hidden'	Find the ***** word

4. Count String Occurrences

Write a function that **receives a text** and a **single word that you need to search**. Print the number of all occurrences of this word in the text.

Input / Output

Input	Output
'This is a word and it also is a sentence', 'is'	2

'softuni is great place for learning new programming languages', 'softuni'	1
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5. Format Grade

Write a function that **receives a grade** between **2.00** and **6.00** and **prints** a formatted line with **grade and description**.

- < 3.00 - "Fail"
- >= 3.00 and < 3.50 - "Poor"
- >= 3.50 and < 4.50 - "Good"
- >= 4.50 and < 5.50 - "Very good"
- >= 5.50 - "Excellent"

Examples

Input	Output
3.33	Poor (3.33)
4.50	Very good (4.50)
2.99	Fail (2)

6. Math Power

Write a function that **calculates** and **print** the value of a number **raised** to a **given power**:

Examples

Input	Output
2, 8	256
3, 4	81

Hints

Create a function that will have **two parameters** - the **number** and the **power**.
Print the result to the console.

7. Repeat String

Write a function that receives a **string** and a **repeat count n**. The function should **return** a new string (the old one repeated **n** times).

Examples

Input	Output
"abc", 3	abccabccabc
"String", 2	StringString

Hints

Use a loop or another method to repeat the input string.
Use the **return** operator to produce the result.

8. Orders

Write a function that calculates the **total price** of an order and prints it on the console. The function should receive one of the following products: **coffee, coke, water, snacks**; and a **quantity** of the product. The **prices** for a single piece of each product are:

- coffee – 1.50
- water – 1.00
- coke – 1.40
- snacks – 2.00

Print the result **formatted** to the **second decimal place**.

Example

Input	Output
"water", 5	5.00
"coffee", 2	3.00

Hints

Create a function and pass the two variables to it.
Print the result in the function.

Hints

Use a **switch** statement for the different operators.

9. Person Info

Write a function that receives **3 parameters**, sets them to an **object**, and **returns** that object.

The input comes as **3 separate strings** in the following order: **firstName, lastName, age**.

Examples

Input	Object Properties
"Peter", "Pan", "20"	firstName: Peter lastName: Pan age: 20
"George", "Smith", "18"	firstName: George lastName: Smith age: 18

10. City

Write a function that receives a **single parameter** – an **object**, containing **five properties**:

{ name, area, population, country, postcode }

Loop through all the **keys** and **print** them with their **values** in format: **"{key} -> {value}"**

See the examples below.

Examples

Input	Output
<pre>{ name: "Sofia", area: 492, population: 1238438, country: "Bulgaria", postCode: "1000" }</pre>	<pre>name -> Sofia area -> 492 population -> 1238438 country -> Bulgaria postCode -> 1000</pre>
<pre>{ name: "Plovdiv", area: 389, population: 1162358, country: "Bulgaria", postCode: "4000" }</pre>	<pre>name -> Plovdiv area -> 389 population -> 1162358 country -> Bulgaria postCode -> 4000</pre>

11. Phone Book

Write a function that stores information about a **person's name** and **phone number**. The input is an **array of strings** with space-separated name and number. **Replace duplicate names**. Print the result as shown.

Example

Input	Output
<pre>['Tim 0834212554', 'Peter 0877547887', 'Bill 0896543112', 'Tim 0876566344']</pre>	<pre>Tim -> 0876566344 Peter -> 0877547887 Bill -> 0896543112</pre>
<pre>['George 0552554', 'Peter 087587', 'George 0453112', 'Bill 0845344']</pre>	<pre>George -> 0453112 Peter -> 087587 Bill -> 0845344</pre>