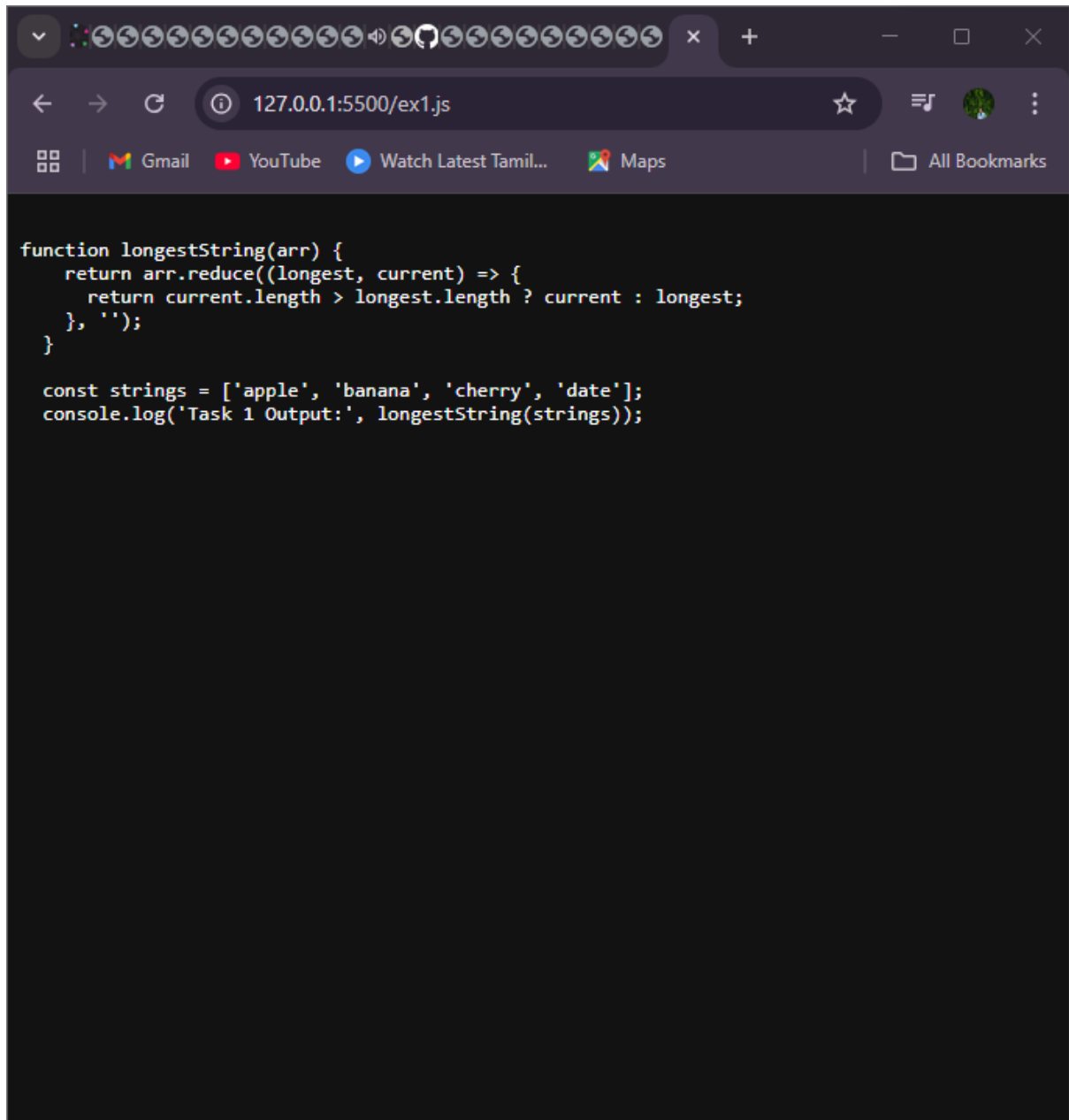


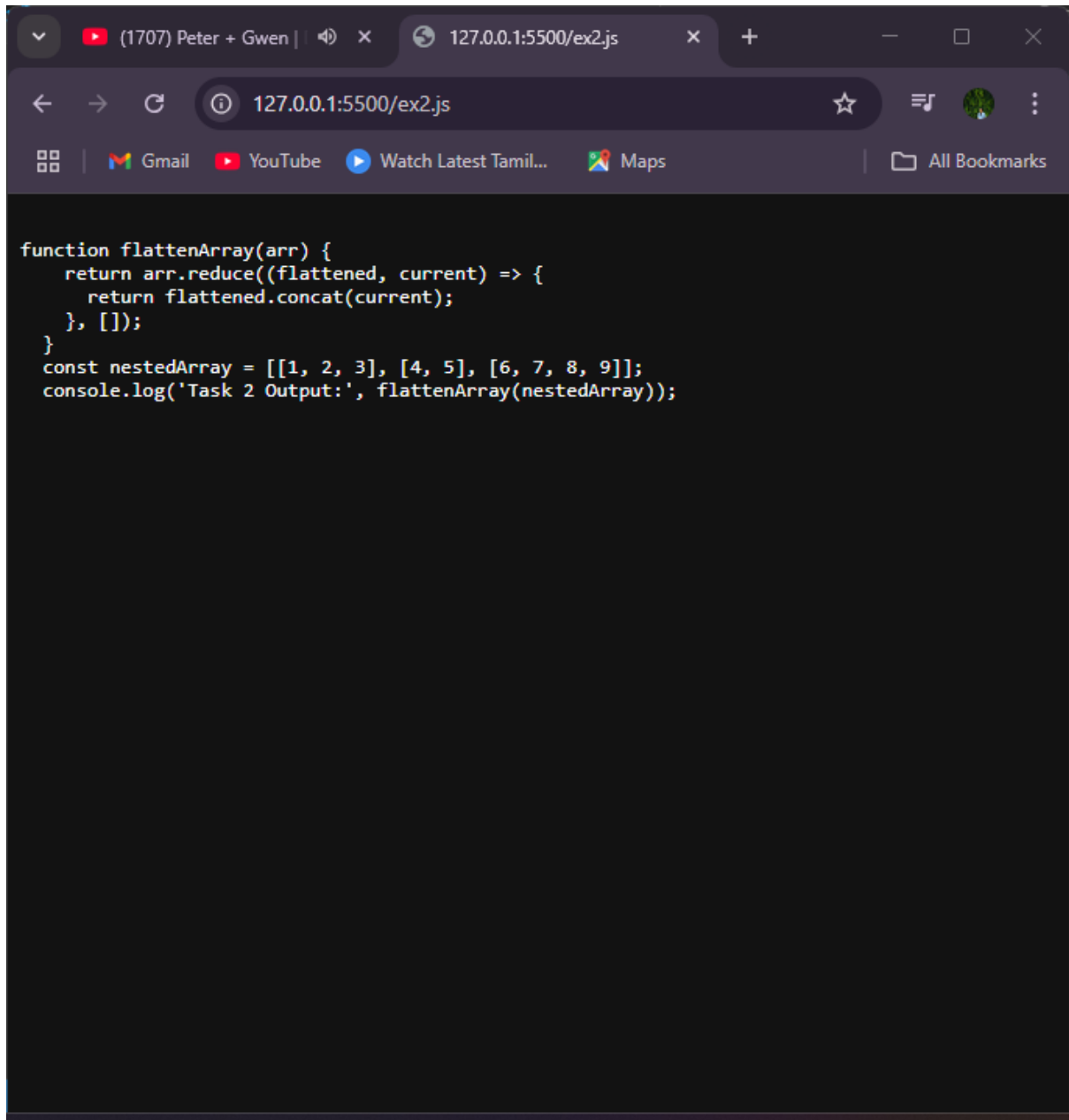
Ex1



The image shows a web browser window with a dark theme. The address bar displays the URL `127.0.0.1:5500/ex1.js`. Below the address bar, there are several bookmark icons: Gmail, YouTube, Watch Latest Tamil..., and Maps. The main content area of the browser displays the following JavaScript code:

```
function longestString(arr) {  
  return arr.reduce((longest, current) => {  
    return current.length > longest.length ? current : longest;  
  }, '');  
}  
  
const strings = ['apple', 'banana', 'cherry', 'date'];  
console.log('Task 1 Output:', longestString(strings));
```

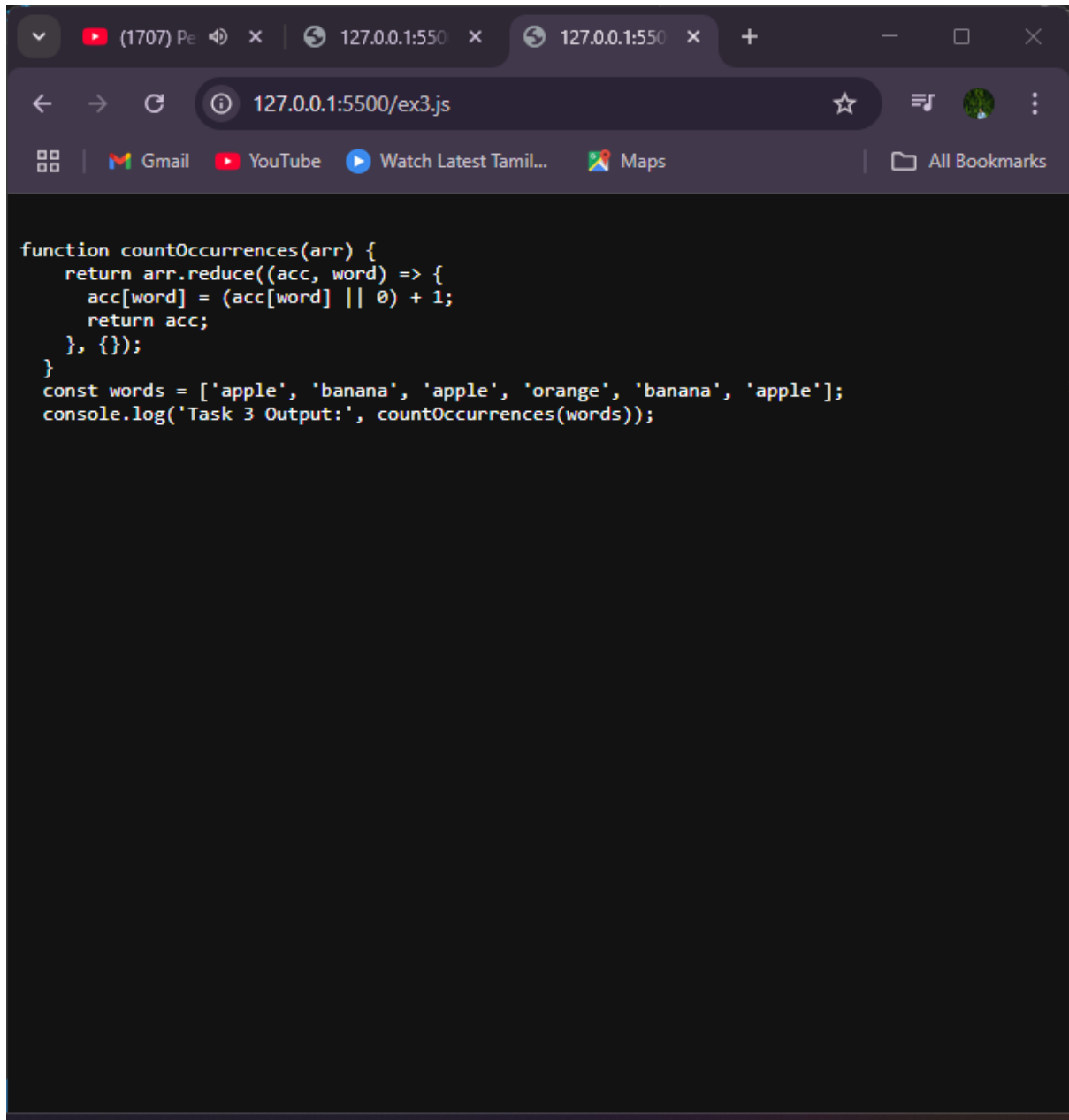
Ex2



The image shows a web browser window with a dark theme. The address bar displays the URL `127.0.0.1:5500/ex2.js`. The browser's tab bar shows two tabs: one with a YouTube icon and the text `(1707) Peter + Gwen`, and another with a globe icon and the text `127.0.0.1:5500/ex2.js`. The browser's toolbar includes navigation buttons (back, forward, refresh), a star icon for bookmarks, and a profile picture. Below the toolbar, there is a row of quick links: a grid icon, the Gmail logo, the YouTube logo, a play button icon with the text `Watch Latest Tamil...`, the Maps logo, and a folder icon with the text `All Bookmarks`. The main content area of the browser is a dark gray rectangle containing the following JavaScript code:

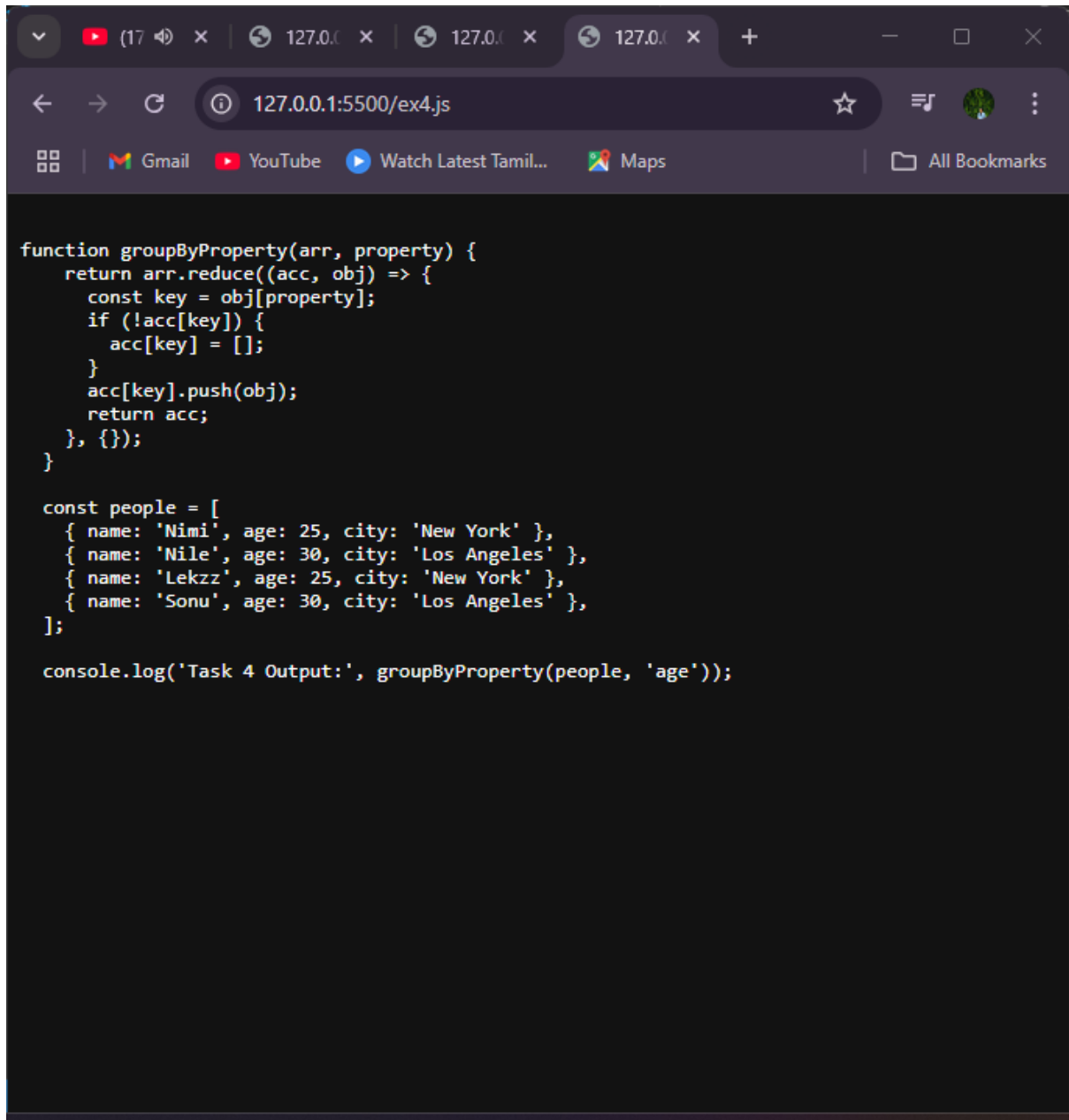
```
function flattenArray(arr) {  
  return arr.reduce((flattened, current) => {  
    return flattened.concat(current);  
  }, []);  
}  
const nestedArray = [[1, 2, 3], [4, 5], [6, 7, 8, 9]];  
console.log('Task 2 Output:', flattenArray(nestedArray));
```

Ex3



```
function countOccurrences(arr) {  
  return arr.reduce((acc, word) => {  
    acc[word] = (acc[word] || 0) + 1;  
    return acc;  
  }, {});  
}  
const words = ['apple', 'banana', 'apple', 'orange', 'banana', 'apple'];  
console.log('Task 3 Output:', countOccurrences(words));
```

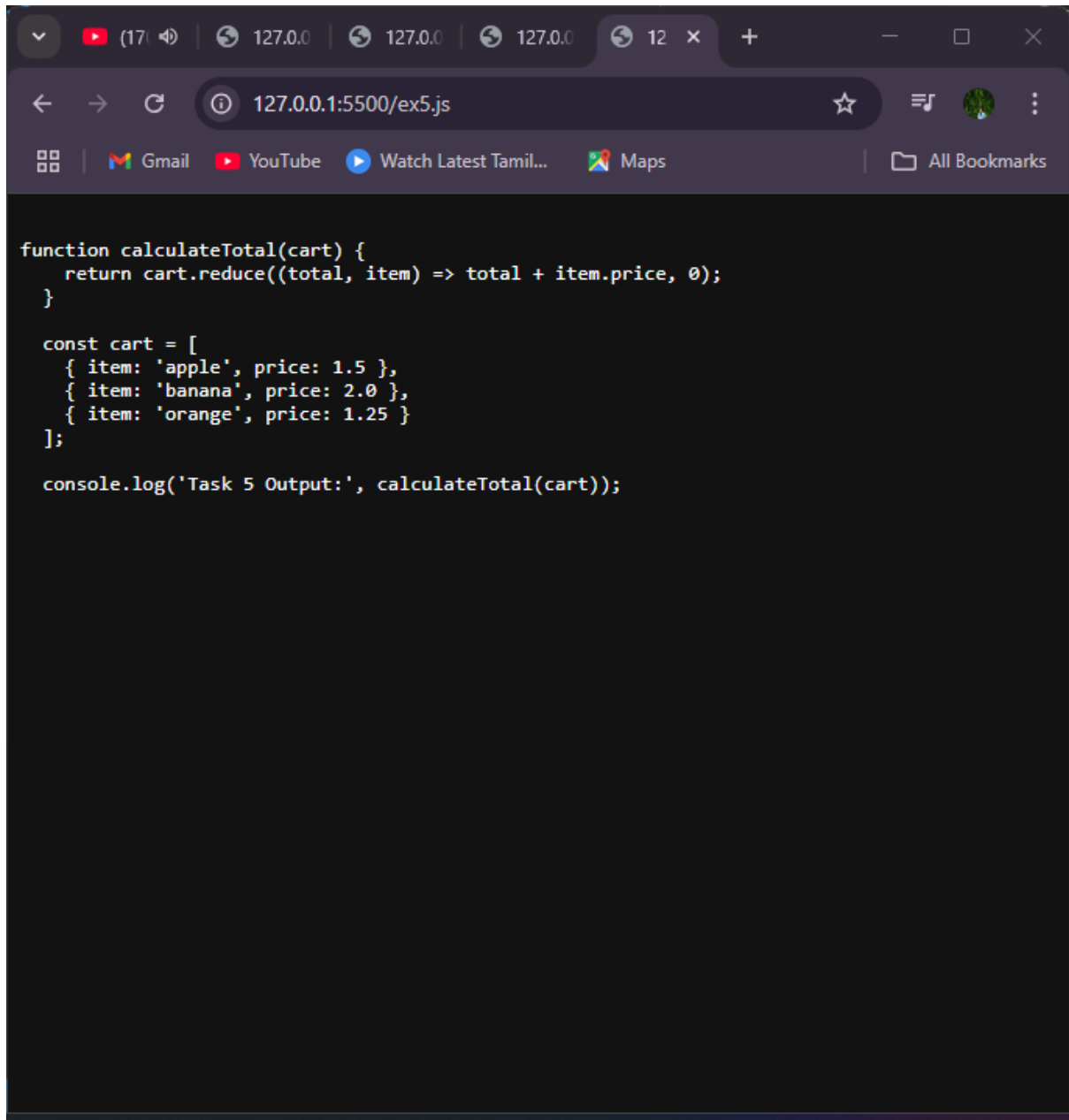
Ex4



The image shows a web browser window with a dark theme. The address bar displays '127.0.0.1:5500/ex4.js'. The browser's tab bar shows three tabs, all with the same address. The page content is a JavaScript file with a function 'groupByProperty' and an array 'people'. The function uses 'arr.reduce' to group objects by a specified property. The 'people' array contains four objects with 'name', 'age', and 'city' properties. The final line of code logs the result of 'groupByProperty(people, 'age')' to the console.

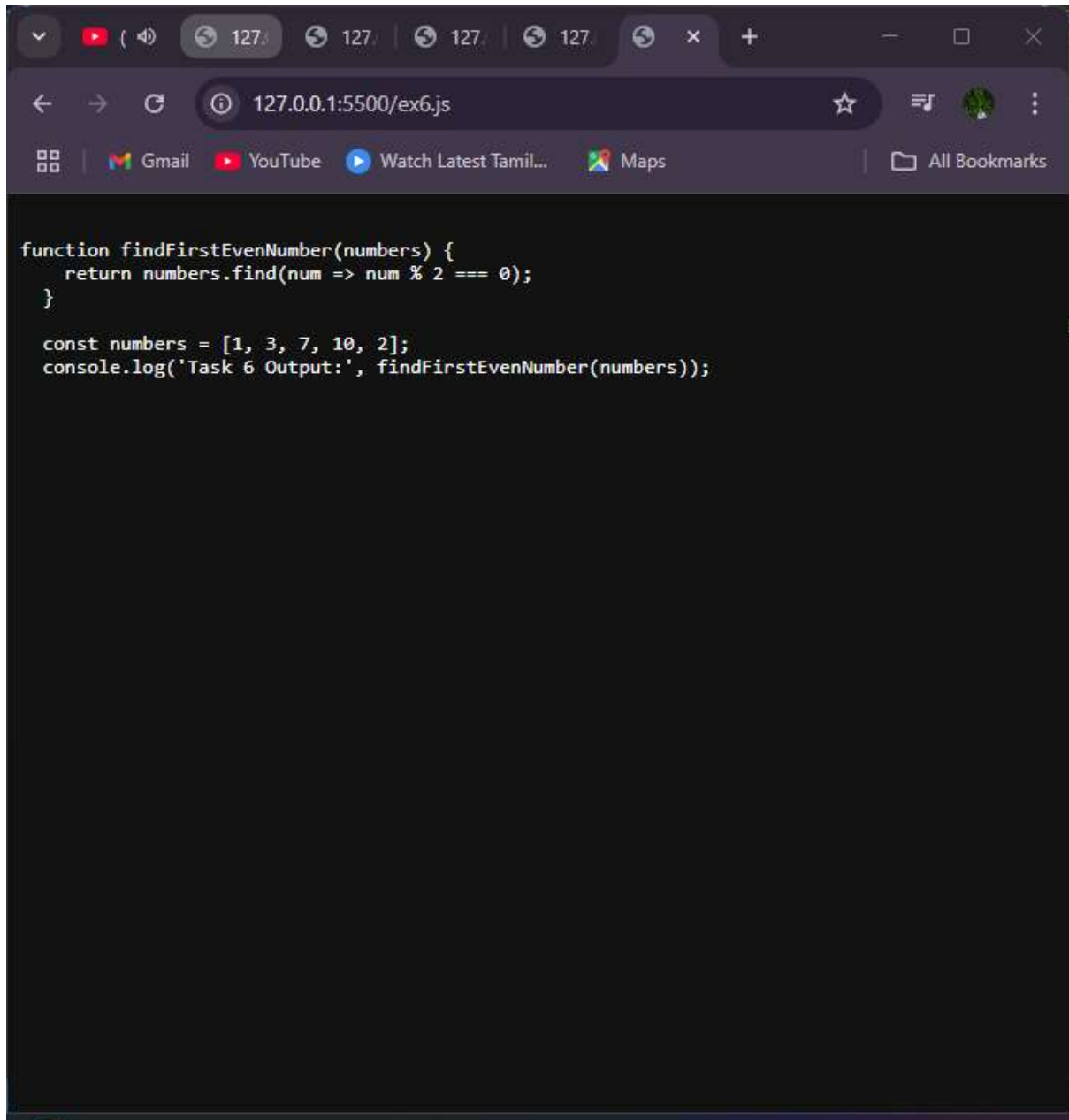
```
function groupByProperty(arr, property) {  
  return arr.reduce((acc, obj) => {  
    const key = obj[property];  
    if (!acc[key]) {  
      acc[key] = [];  
    }  
    acc[key].push(obj);  
    return acc;  
  }, {});  
}  
  
const people = [  
  { name: 'Nimi', age: 25, city: 'New York' },  
  { name: 'Nile', age: 30, city: 'Los Angeles' },  
  { name: 'Lekzz', age: 25, city: 'New York' },  
  { name: 'Sonu', age: 30, city: 'Los Angeles' },  
];  
  
console.log('Task 4 Output:', groupByProperty(people, 'age'));
```

Ex5



```
function calculateTotal(cart) {  
  return cart.reduce((total, item) => total + item.price, 0);  
}  
  
const cart = [  
  { item: 'apple', price: 1.5 },  
  { item: 'banana', price: 2.0 },  
  { item: 'orange', price: 1.25 }  
];  
  
console.log('Task 5 Output:', calculateTotal(cart));
```

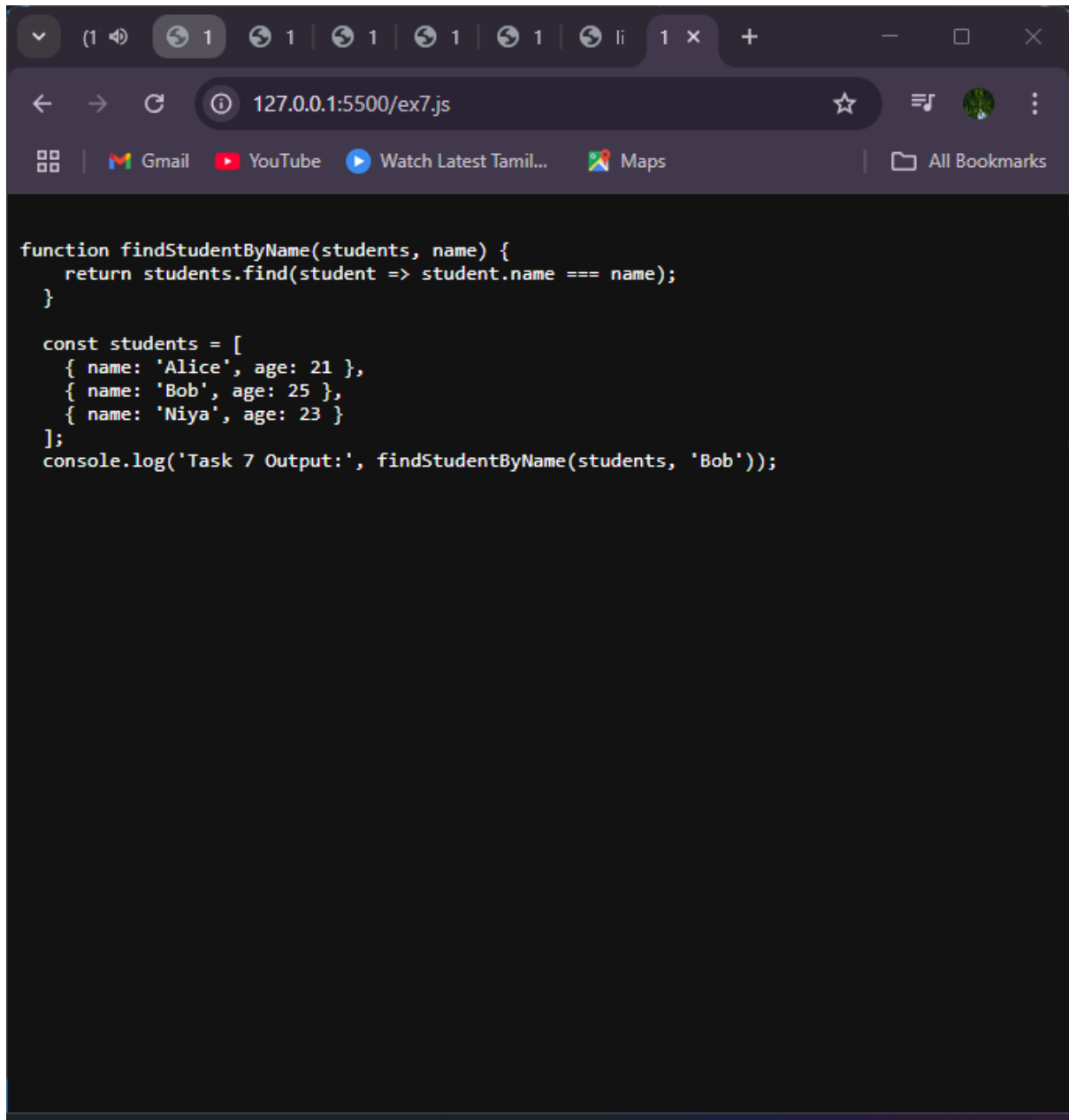
Ex6



The image shows a web browser window with a dark theme. The address bar displays the URL `127.0.0.1:5500/ex6.js`. Below the address bar, there are several bookmarks: Gmail, YouTube, Watch Latest Tamil..., and Maps. The main content area of the browser displays the following JavaScript code:

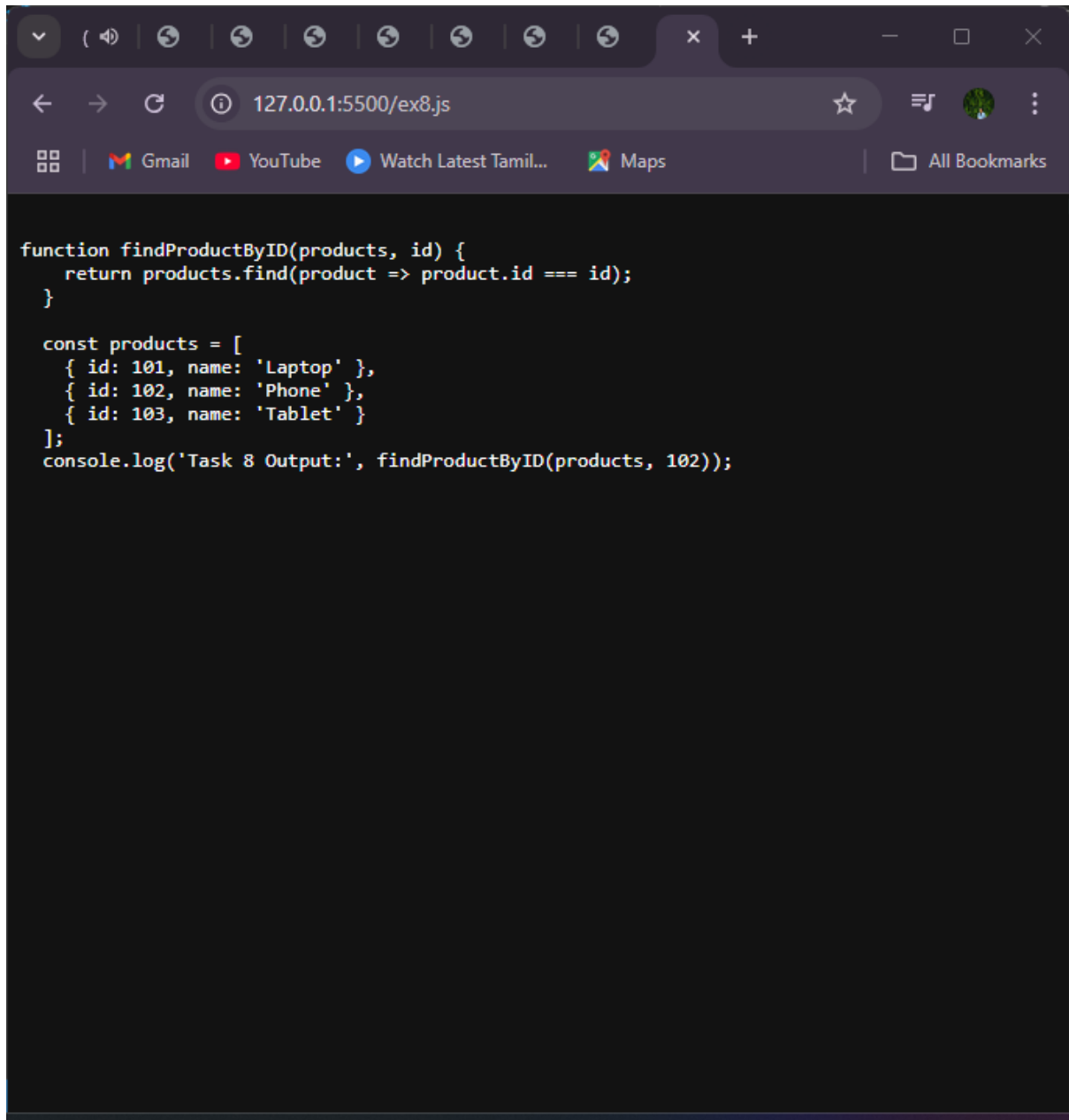
```
function findFirstEvenNumber(numbers) {  
  return numbers.find(num => num % 2 === 0);  
}  
  
const numbers = [1, 3, 7, 10, 2];  
console.log('Task 6 Output:', findFirstEvenNumber(numbers));
```

Ex7



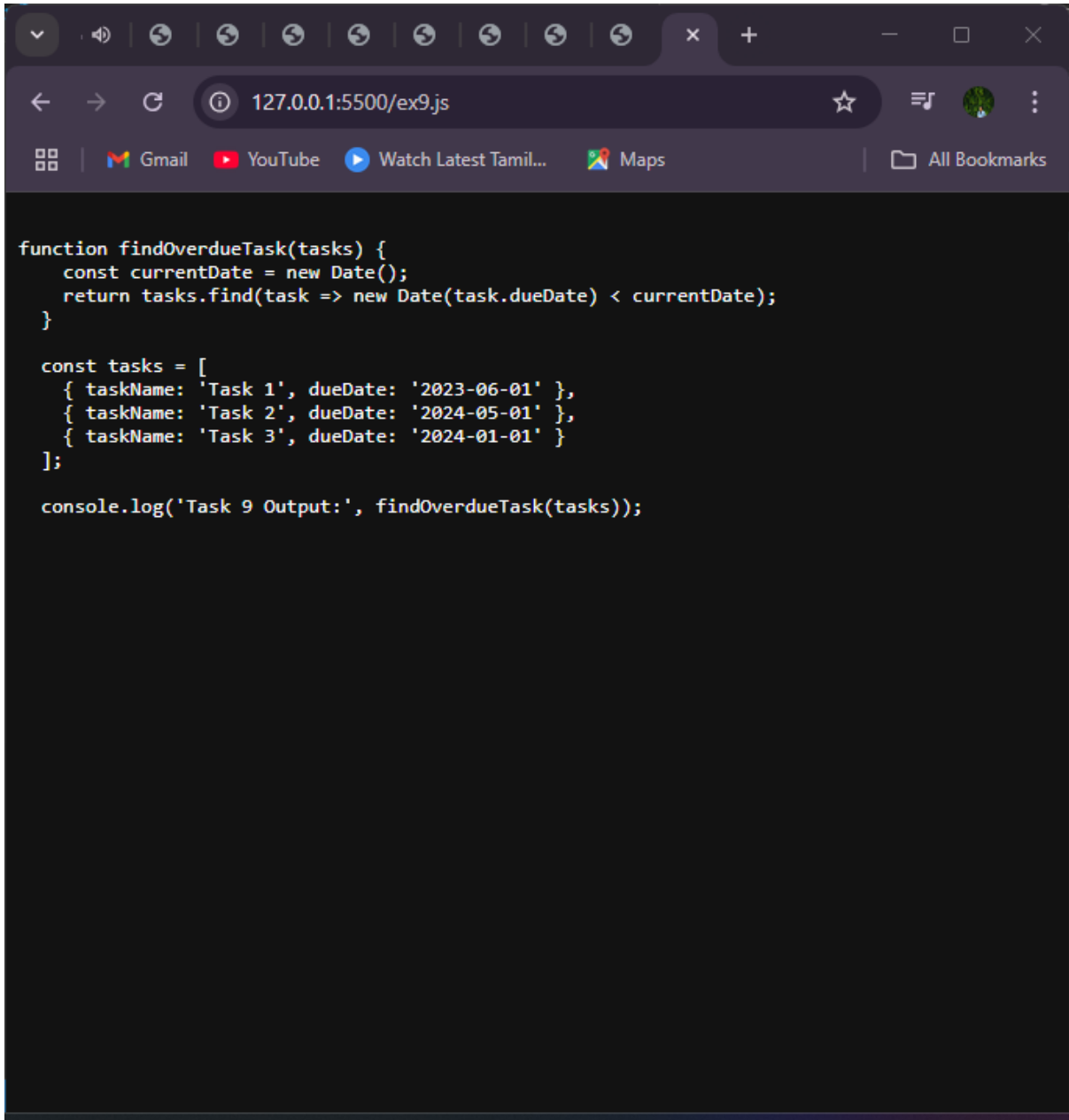
```
function findStudentByName(students, name) {  
  return students.find(student => student.name === name);  
}  
  
const students = [  
  { name: 'Alice', age: 21 },  
  { name: 'Bob', age: 25 },  
  { name: 'Niya', age: 23 }  
];  
console.log('Task 7 Output:', findStudentByName(students, 'Bob'));
```

Ex8



```
function findProductByID(products, id) {  
  return products.find(product => product.id === id);  
}  
  
const products = [  
  { id: 101, name: 'Laptop' },  
  { id: 102, name: 'Phone' },  
  { id: 103, name: 'Tablet' }  
];  
console.log('Task 8 Output:', findProductByID(products, 102));
```


Ex9



```
function findOverdueTask(tasks) {  
  const currentDate = new Date();  
  return tasks.find(task => new Date(task.dueDate) < currentDate);  
}  
  
const tasks = [  
  { taskName: 'Task 1', dueDate: '2023-06-01' },  
  { taskName: 'Task 2', dueDate: '2024-05-01' },  
  { taskName: 'Task 3', dueDate: '2024-01-01' }  
];  
  
console.log('Task 9 Output:', findOverdueTask(tasks));
```