THE LEAN PROGRAMMER | CodeTo Express

Day 4, Today's Topic
The filter helper

DAILY JS

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/* ================ Daily JS - Day 4 ================ */
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  # Day 4: The `filter` helper

  As the name suggests, the `filter` helper is
  used to filter out some specific elements from
  an array of elements.

  It creates a new array from the elements of the
  original array which pass the given criteria.

  The criteria is generally given as a condition in
  the iterator function.

  Unlike `find` helper, `filter` returns an arrow
  of elements which pass the criteria.


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  ## Syntax

  ```js
  array.filter(function(currentValue, index, arr),
    thisValue)
  ```


  - **currentValue**: Required.
    The value of the current element
  - **index**: Optional.
    The array index of the current element
  - **arr**: Optional.
    The array object the current element belongs to
  - **thisValue**: Optional.
    The array object the current element belongs to

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  /**
   * Given an array of numbers,
   * find the count of numbers greater than 100
   */

  const numbers = [30, 42, 105, 294, 876, 444, 98, 55, 671];

  // Without filter helper
  const filteredNum = [];
  for (let i=0; i<numbers.length; i++) {
      if (numbers[i] > 100)
          filteredNum.push (numbers[i]);
  }
  console.log ('filteredNum: ', filteredNum);


  // With filter, without arrow fn
  const filteredNum2 = numbers.filter (function (number) {
      return number>100;
  });
  console.log ('filteredNum2: ', filteredNum2);


  // With filter, with arrow fn
  let filteredNum3 = numbers.filter (number => number>100);
  console.log ('filteredNum3: ', filteredNum3);


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/**
 * Extract the information of students
 * from an array having information about people
 */

var people = [
    { name: 'John', isStudent: false },
    { name: 'Mark', isStudent: true },
    { name: 'Kepler', isStudent: false },
    { name: 'Stan', isStudent: true },
    { name: 'Ben', isStudent: true },
];

let students = [];

// Without filter helper
for (let i=0; i<people.length; i++) {
    if (people[i].isStudent)    students.push(people[i]);
}
console.log ('Students1: ', students);

// With filter without arrow fn
let students3 = people.filter(function (person) {
    return person.isStudent;
})
console.log ('Students2: ', students2);

// With filter with arrow fn
let students3 = people.filter(person ⇒ person.isStudent)
console.log ('Students3: ', students3);


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   ## Homework for you

   1. Make a vegetable shop, given the data about
      vegetables, their quantity and price, allow user
      to query the available vegetables based on quantity
      and budget.

   2. Filter out the invalid roll numbers (roll numbers
      which are greater than 100 or less than 0), and
      return the list of correct roll numbers

   3. Given an array of student information, find the list
      of students eligible for final exams based on their
      attendance (>75%)

   4. From a list of words find the words having more
      than 5 letters.

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Thank you!

Feel free to reach out...

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