Functionality Investigation Sheet

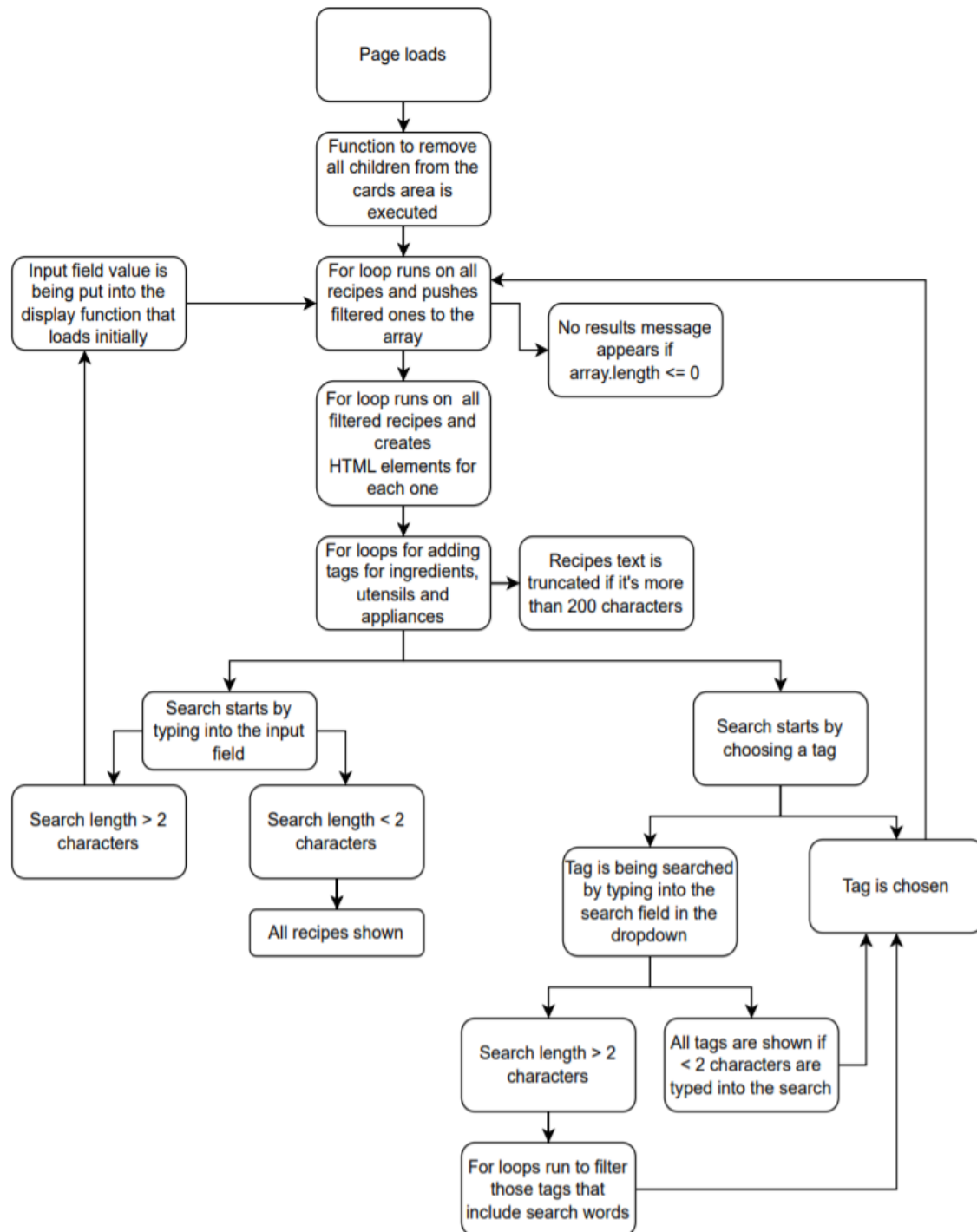|	
Feature: Search functionality for the recipes page	**Feature #1**
Problem: To be able to perform search as fast as possible and display the result the moment they are typed into the search form.	

Option 1: Using native loops (for / for of)
This option uses native loops to run through the array's items

Benefits	Disadvantages
● Method is more straightforward ● It's more easy to see the loops structure in the code	● Code requires additional variables and space for the loops ● Benchmark shows slower results than those for the array methods

Minimum number of characters to initiate the search: 2

Option 2: Using array class methods
This option uses array class methods to run through the array's items

Benefits	Disadvantages
● Code is more compact ● Benchmark shows quicker results than those for the native loop method	● Array methods could be less clear when looking through the code

Minimum number of characters to initiate the search: 2

Solution retention:
In general I would suggest using the array methods approach as it uses less code and runs slightly faster. For loops method can still be used if more straightforward code structure is needed for possible future changes, but apart from that array methods approach seems to be more efficient.

Les petits plats

Flowchart for the native loops method
(script-A)

```
                              ┌──────────────┐
                              │  Page loads  │
                              └──────┬───────┘
                                     ↓
                          ┌──────────────────────┐
                          │ Function to remove    │
                          │ all children from the │
                          │ cards area is         │
                          │ executed              │
                          └──────────┬────────────┘
                                     ↓
┌──────────────────┐      ┌──────────────────────┐      ┌──────────────────┐
│ Input field value│─────→│ For loop runs on all  │─────→│ No results message│
│ is being put into│      │ recipes and pushes    │      │ appears if        │
│ the display      │      │ filtered ones to the  │      │ array.length <= 0 │
│ function that    │      │ array                 │      └──────────────────┘
│ loads initially  │      └──────────┬────────────┘
└──────────────────┘                 ↓
                          ┌──────────────────────┐
                          │ For loop runs on all  │
                          │ filtered recipes and  │
                          │ creates               │
                          │ HTML elements for     │
                          │ each one              │
                          └──────────┬────────────┘
                                     ↓
                          ┌──────────────────────┐      ┌──────────────────┐
                          │ For loops for adding  │─────→│ Recipes text is   │
                          │ tags for ingredients, │      │ truncated if it's │
                          │ utensils and          │      │ more than 200     │
                          │ appliances            │      │ characters        │
                          └───────────────────────┘      └──────────────────┘
```

- Search starts by typing into the input field
  - Search length > 2 characters
  - Search length < 2 characters
    - All recipes shown

- Search starts by choosing a tag
  - Tag is being searched by typing into the search field in the dropdown
    - Search length > 2 characters
      - For loops run to filter those tags that include search words
    - All tags are shown if < 2 characters are typed into the search
  - Tag is chosen

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Flowchart for the array class method
(script-B)

```
                              Page loads
                                  |
                                  v
                          Function to remove
                          all children from the
                           cards area is
                              executed
                                  |
                                  v
                          Filter method runs on
                          all recipes and stores
                          filtered ones into the
                               array
```

Input field value is
being put into the
display function that
loads initially

forEach method
pushes items into the
array

No results message
appears if
array.length <= 0

forEach method runs
on all filtered recipes
and creates
HTML elements for
each one

forEach methods for
adding tags for
ingredients, utensils
and appliances

Recipes text is
truncated if it's more
than 200 characters

Search starts by
typing into the input
field

Search starts by
choosing a tag

Search length > 2
characters

Search length < 2
characters

Tag is being searched
by typing into the
search field in the
dropdown

Tag is chosen

All recipes shown

Search length > 2
characters

All tags are shown if
< 2 characters are
typed into the search

forEach method run
to filter those tags
that include search
words

RUN TESTS   GENERATE PAGE URL   NEW BENCHMARK

result

Script-B. Array methods (154021) 🏆

100%

Script-A. Native loops (148291)

96.28%