Tutorial #2: Javascript and jQuery

CS374: Introduction to HCI

2017. 3. 13.

Hyungyu Shin

Team Formation

- Due today 11:59pm

- **You SHOULD form a group of four**

- If you have not yet formed a group of four, we'll give a chance
  - advertise your group, or
  - advertise yourself

- Please make it at the end of tutorial and submit the form

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Summary of Previous Tutorial

- HTML for presenting structure of a webpage
- CSS for presenting contents

- Web browsers for interpreting and rendering web pages

- **Separation of presentation and content**

The gospel (according to Zeldman)

Behaviour

Tutorial #2

JS

Presentation

CSS

Tutorial #1

Structure

HTML

https://www.christianheilmann.com/2011/08/15/getting-rusty-we-need-new-best-practices-for-a-different-development-world/

Learning Objective

Student will be able to build the following website on codepen.io

Which course do you prefer ?

CS492: Crowdsourcing

CS374: Introduction to HCI

	add this option

Idea	Count
CS492: Crowdsourcing	2
CS374: Introduction to HCI	1

Try it !

http://codepen.io/hgshin/pen/OpmQdZ/

Javascript

- A language to make a web site **do something**

- Simply think a web browser execute the javascript code

Example

- Compute $1 + \cdots + n$ and print it on <u>codepen.io</u>

Learning Objective

Which action should we implement ?

Which course do you prefer ?

Idea	Count
CS492: Crowdsourcing	2
CS374: Introduction to HCI	1

CS492: Crowdsourcing

CS374: Introduction to HCI

add this option

Learning Objective

Which action should we implement ?

Which course do you prefer ?

1. hover

Idea	Count
CS492: Crowdsourcing	2
CS374: Introduction to HCI	1

CS492: Crowdsourcing

CS374: Introduction to HCI

add this option

Learning Objective

Which action should we implement ?

Which course do you prefer ?

1. hover
2. click & counting

CS492: Crowdsourcing

CS374: Introduction to HCI
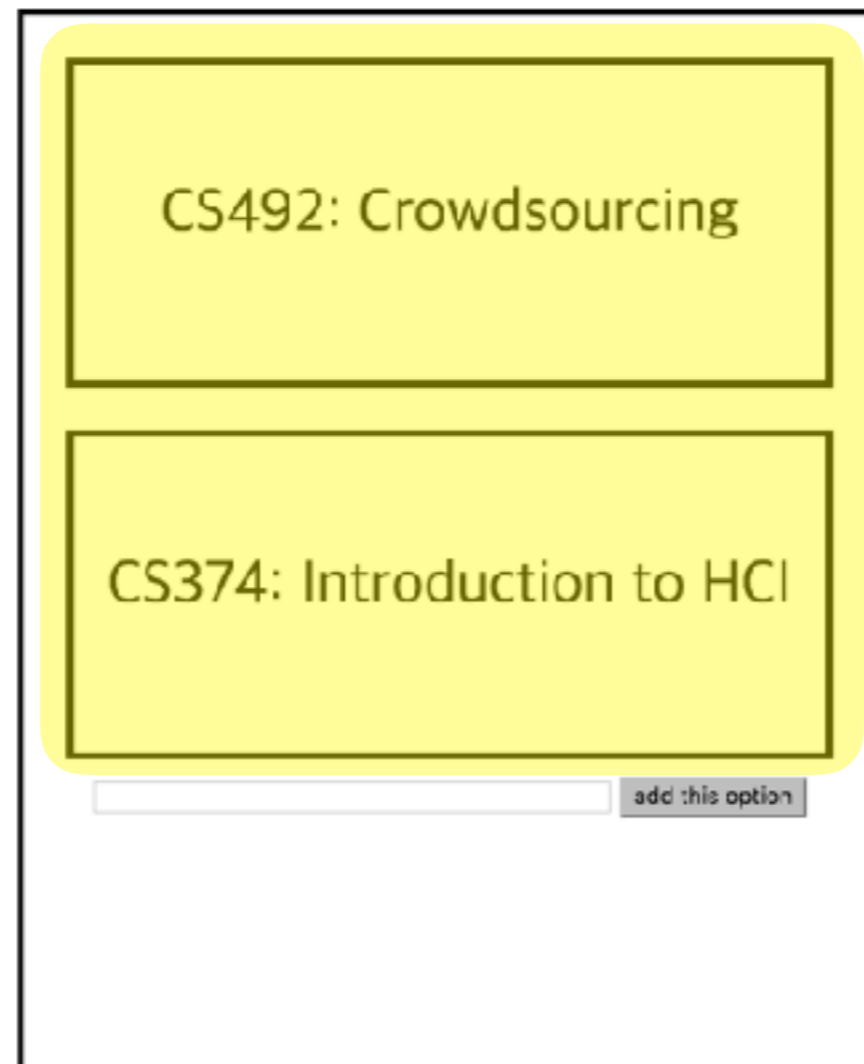
add this option

Idea	Count
CS492: Crowdsourcing	2
CS374: Introduction to HCI	1

Learning Objective

Which action should we implement ?

Which course do you prefer ?

1. hover
2. click & counting
3. add an option

CS492: Crowdsourcing

CS374: Introduction to HCI

add this option

Idea	Count
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Learning Objective

Which action should we implement ?

Which course do you prefer ?

1. hover
2. click & counting
3. add an option
4. sorting
5. presenting on
   the table

CS492: Crowdsourcing

CS374: Introduction to HCI

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Learning Objective

Which action should we implement ?

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CS492: Crowdsourcing

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Event

- Events happens whenever interesting things take place
  - Click / Mouse move
  - Typing keyboard
  - User-generated event

Example

- Raise an alert when a user clicks a button

Learning Objective

Which course do you prefer ?

1. hover
2. click & counting
3. add an option
4. sorting
5. presenting on
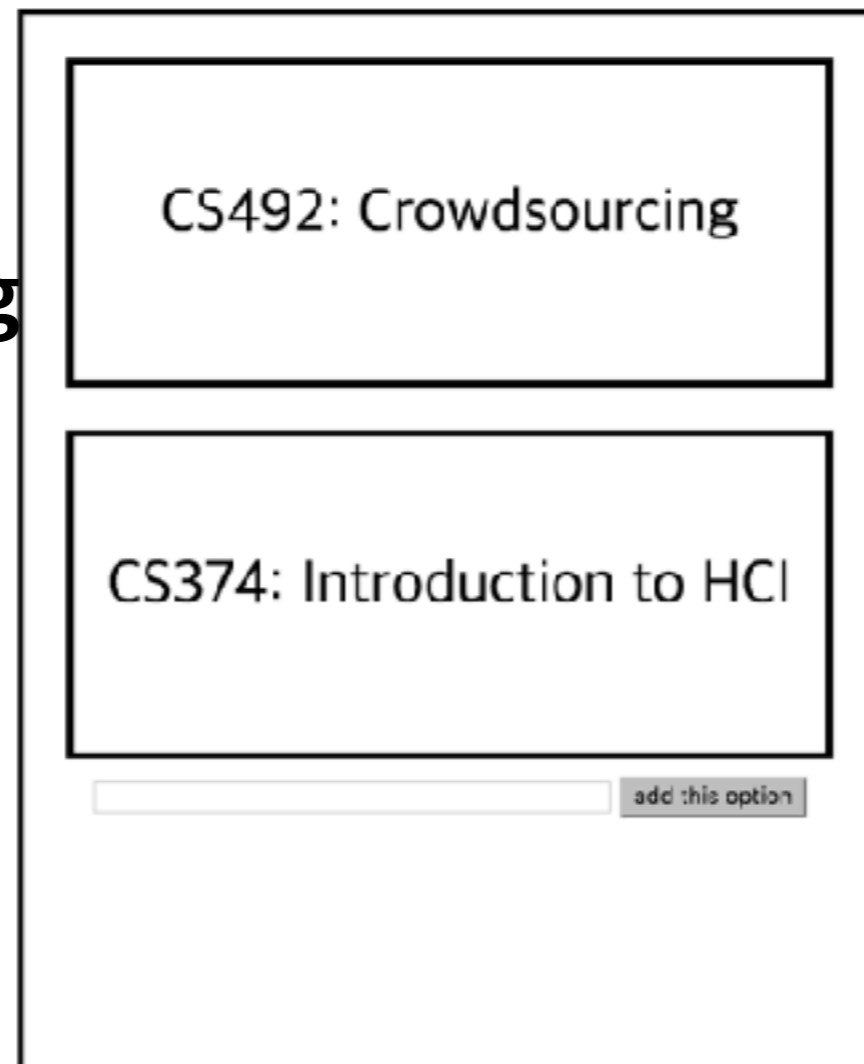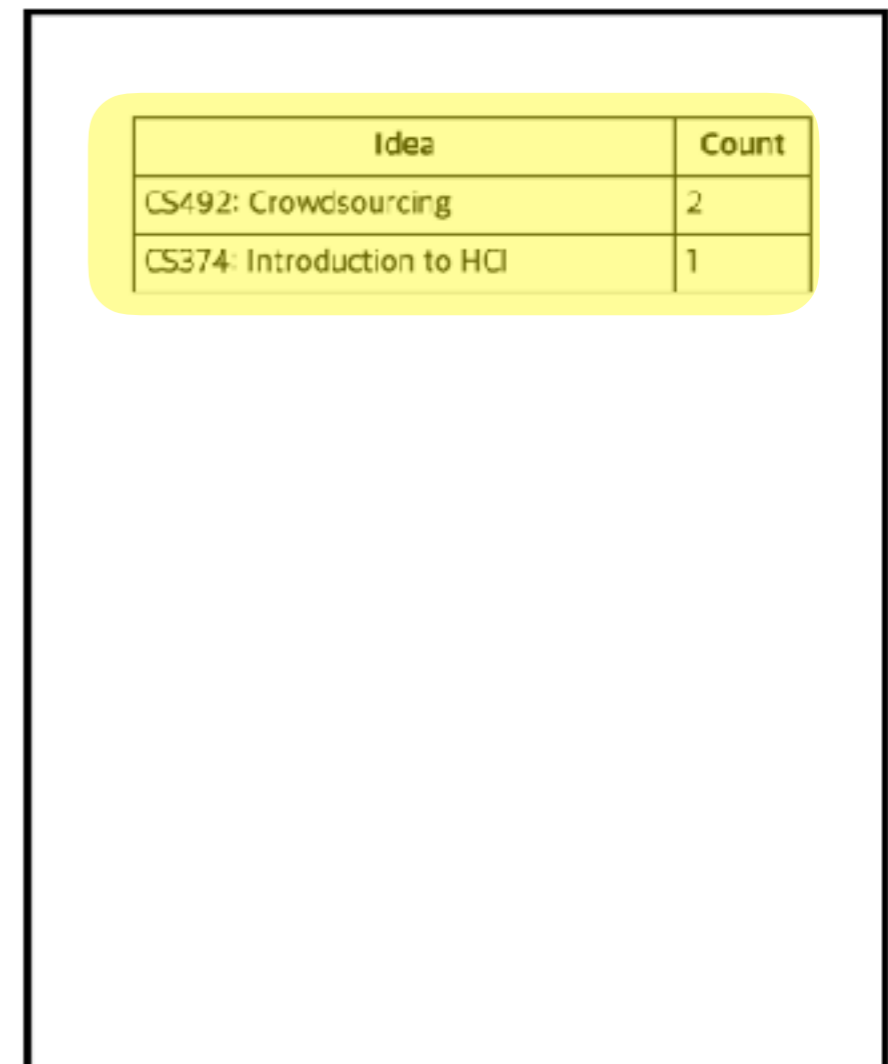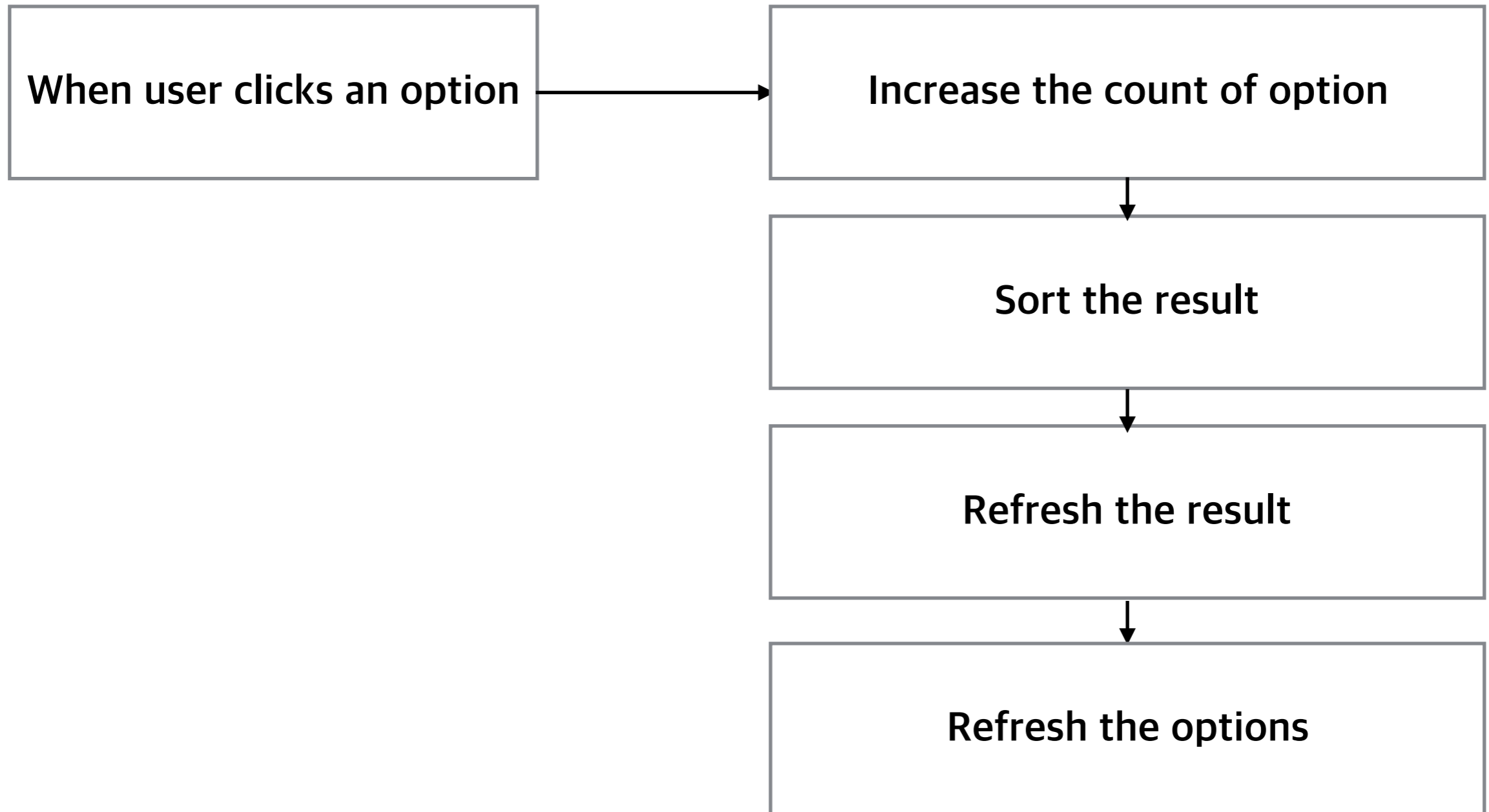   the table

CS492: Crowdsourcing

CS374: Introduction to HCI

add this option

Idea	Count
CS492: Crowdsourcing	2
CS374: Introduction to HCI	1

Algorithm

When user clicks an option

Algorithm

```
┌─────────────────────────────┐          ┌─────────────────────────────────┐
│                             │          │                                 │
│  When user clicks an option │ ───────► │    Increase the count of option │
│                             │          │                                 │
└─────────────────────────────┘          └─────────────────────────────────┘
                                                          │
                                                          ▼
                                          ┌─────────────────────────────────┐
                                          │                                 │
                                          │          Sort the result        │
                                          │                                 │
                                          └─────────────────────────────────┘
                                                          │
                                                          ▼
                                          ┌─────────────────────────────────┐
                                          │                                 │
                                          │         Refresh the result      │
                                          │                                 │
                                          └─────────────────────────────────┘
                                                          │
                                                          ▼
                                          ┌─────────────────────────────────┐
                                          │                                 │
                                          │        Refresh the options      │
                                          │                                 │
                                          └─────────────────────────────────┘
```

Algorithm

When user click "add an option" button

Algorithm

When user click "add an option" button	→	Add an option with count 1

Clear the input box

Refresh the result

Refresh the options

Summary of Algorithm

When user clicks an option

↓

Increase the count of option

↓

Sort the result

↓

Refresh the result

↓

Refresh the options

When user click "add an option" button

↓

Add an option with count 1

↓

Clear the input box

↓

Refresh the result

↓

Refresh the options

Let's implement it !

http://shoutkey.com/breeze
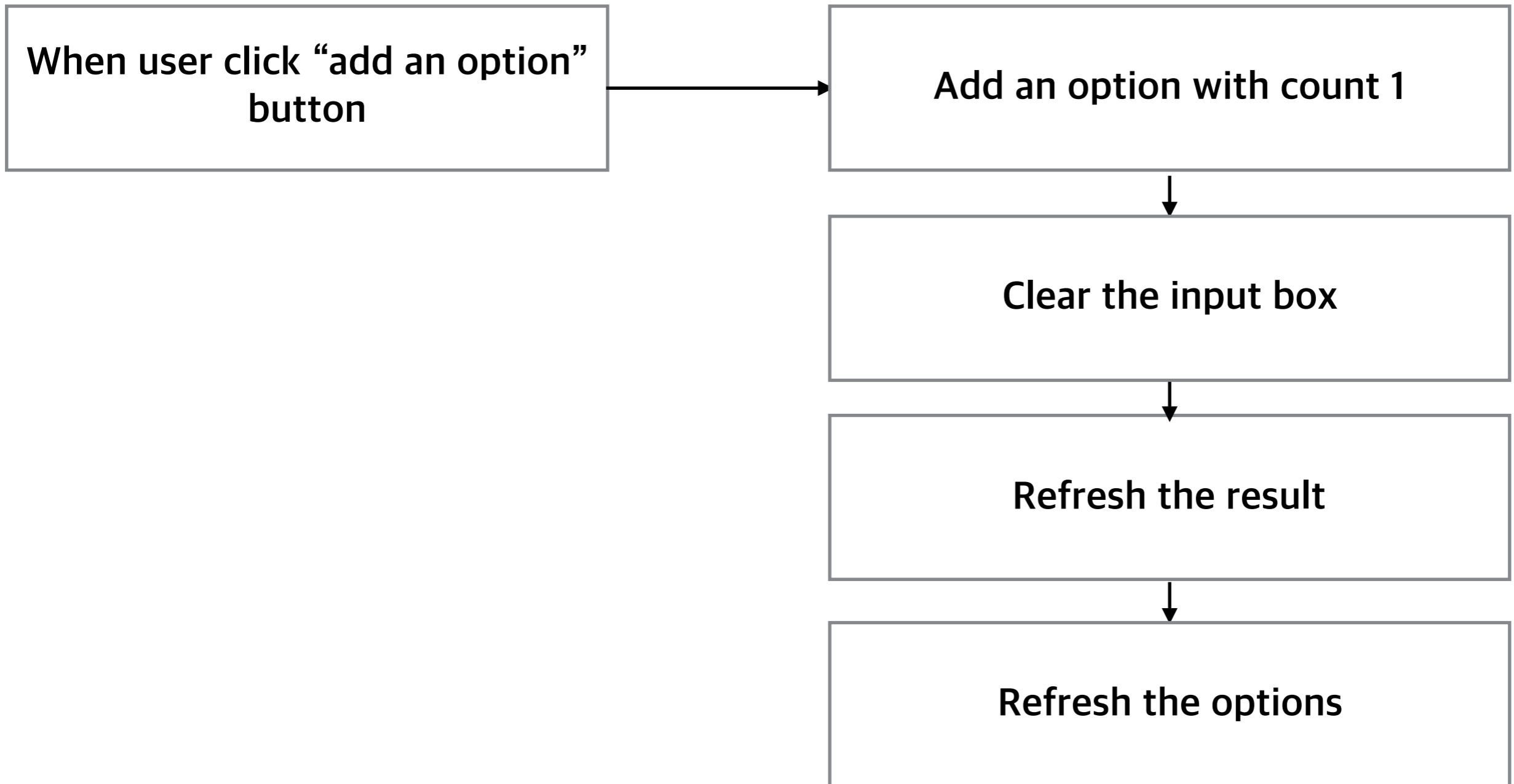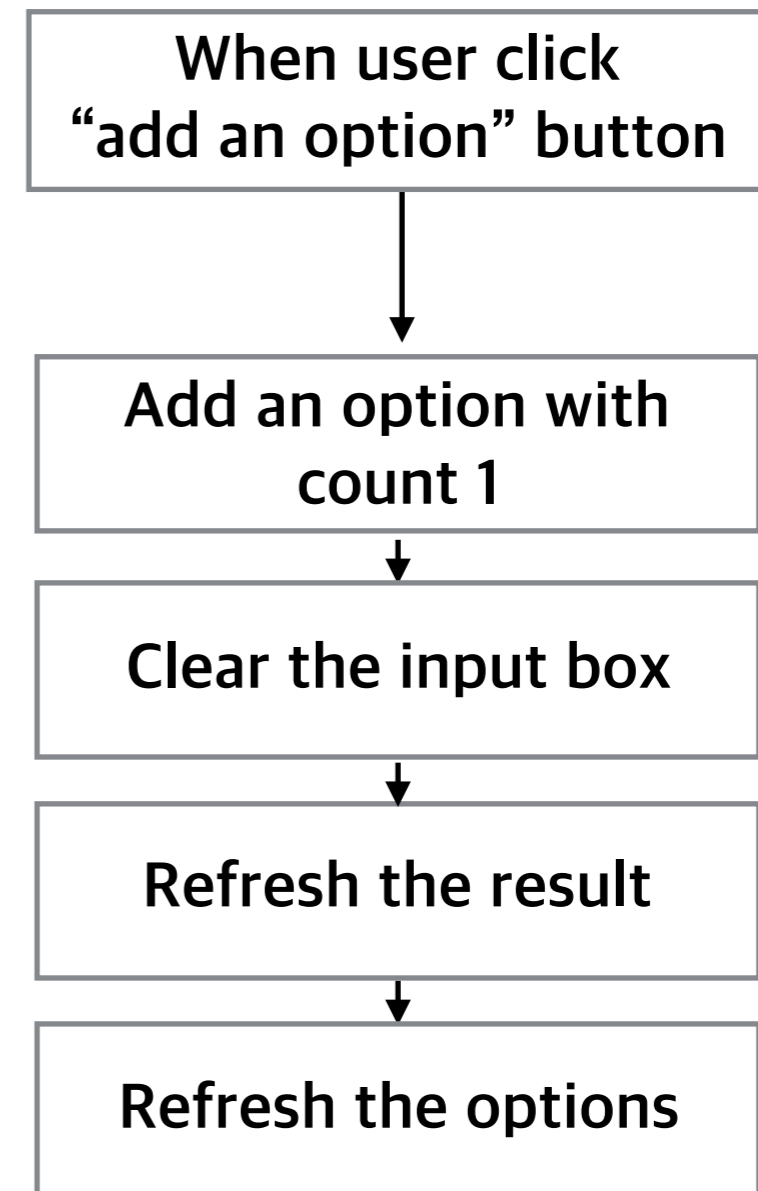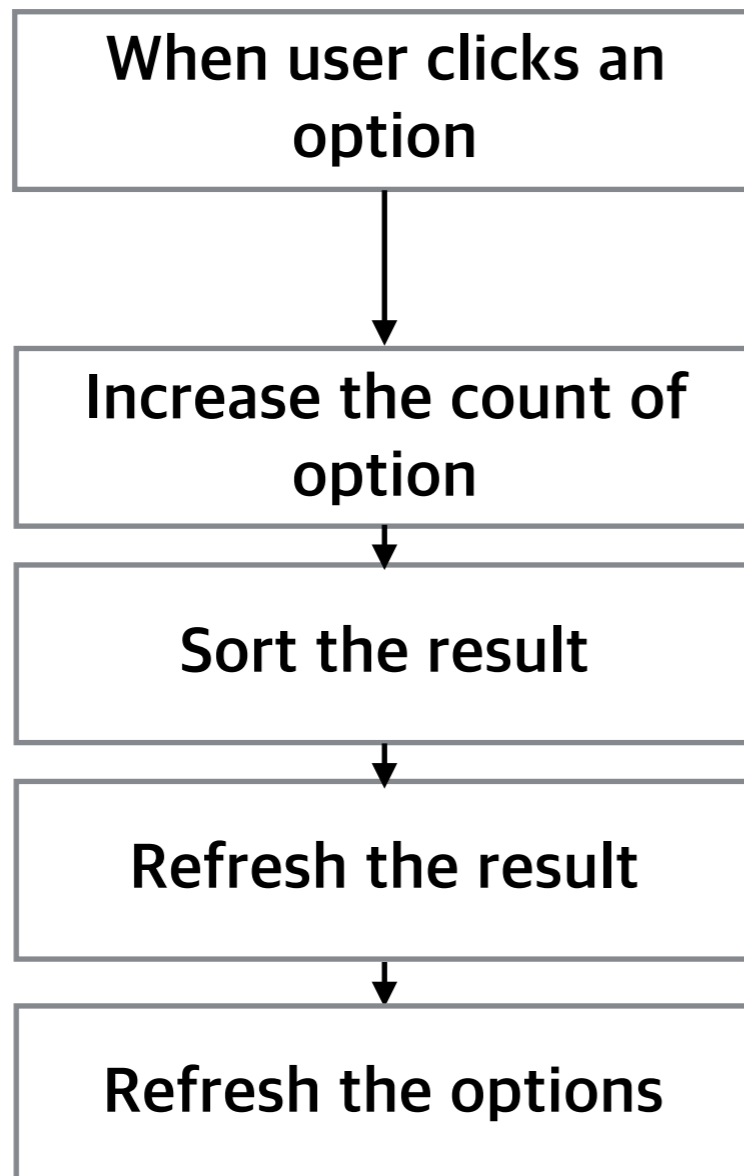
jQuery

- jQuery is one of the most widely used javascript library

- Philosophy : write less, do more

Let's revise the code with jQuery

See whether you really can do more with less code

Summary

- Javascript
  - A language to make a web site do something
  - DOM provides the way to access HTML elements
    - an HTML element is handled as an object in javascript

- jQuery
  - One of the most widely used javascript library

- **Google it whenever you want to do something !**

Thank you for listening :D

Questions are welcomed

Hyungyu Shin