# JS Final Project

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# Outline

1. Tools & Env
2. Flow
3. Functionality & Coding Structure
4. Demo

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# Tools & Env

- html, javascript, css, bat

- VS code, Notepad++, Node js, OS

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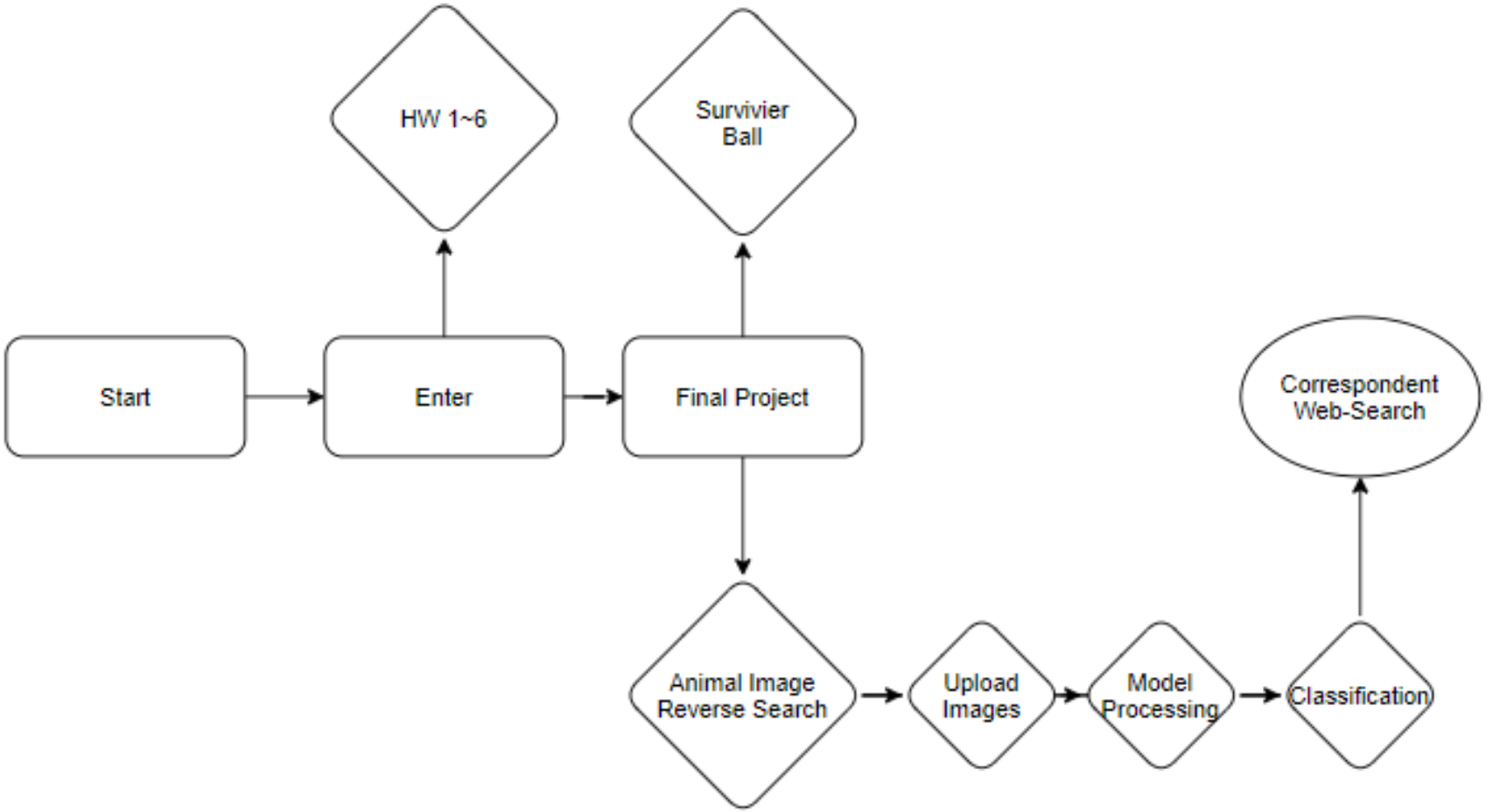
# Flow


HW 1~6
Survivier Ball
Start
Enter
Final Project
Correspondent Web-Search
Animal Image Reverse Search
Upload Images
Model Processing
Classification

# Outline

1. Tools & Env
2. Flow
3. **Functionality & Coding Structure**
4. Demo

# Functionality & Coding Structure

1. Coverage => start.html
2. Transmission => enter.html / hw.html
3. Game => game.html
4. Animal Image Reverse Search => Search.html

# Functionality & Coding Structure

1. Coverage => start.html
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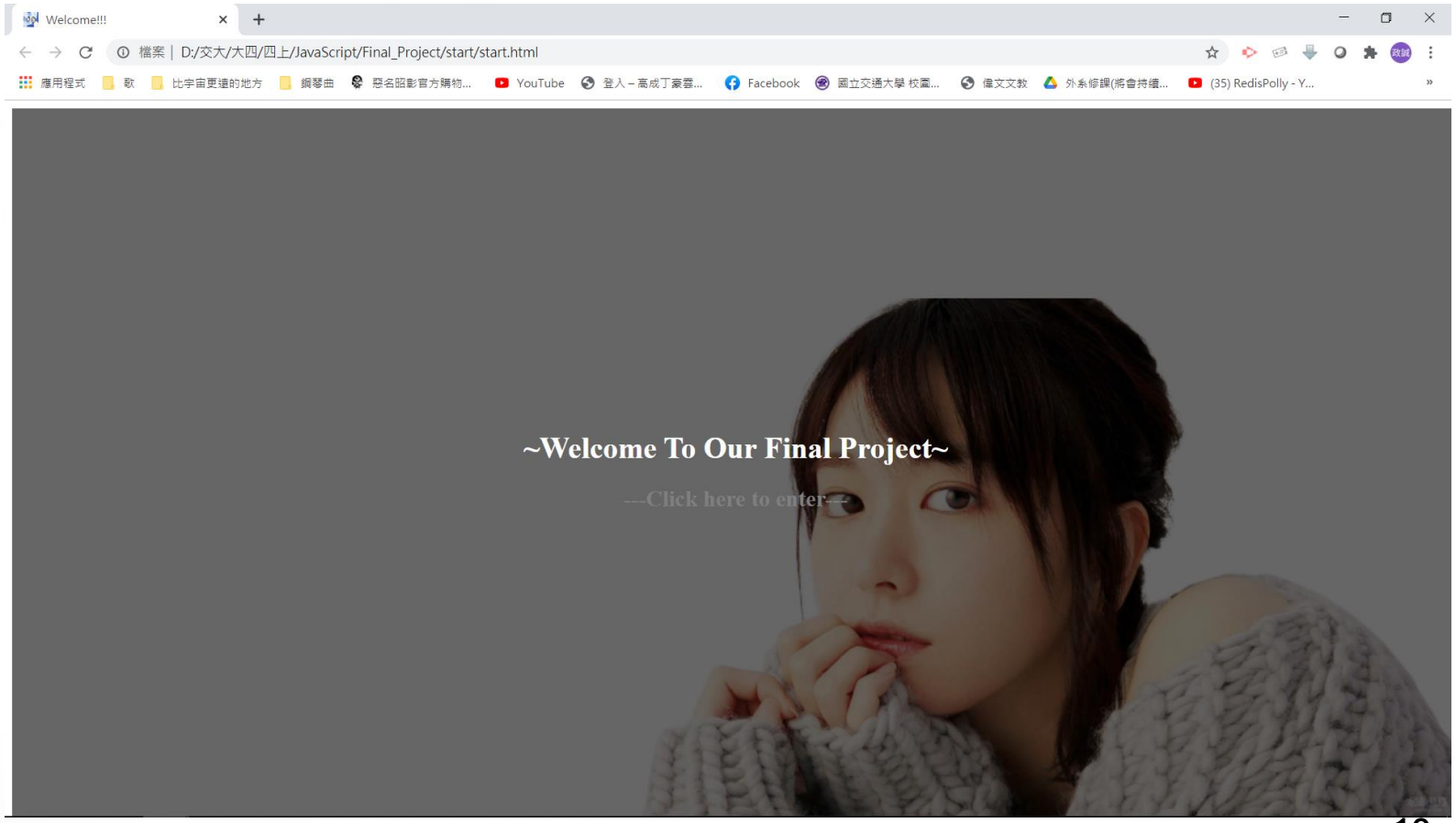
# start.html/css

1. rgba(0, 0, 0, 0.6)
2. a href
3. :active



# Functionality & Coding Structure

1. Coverage => start.html
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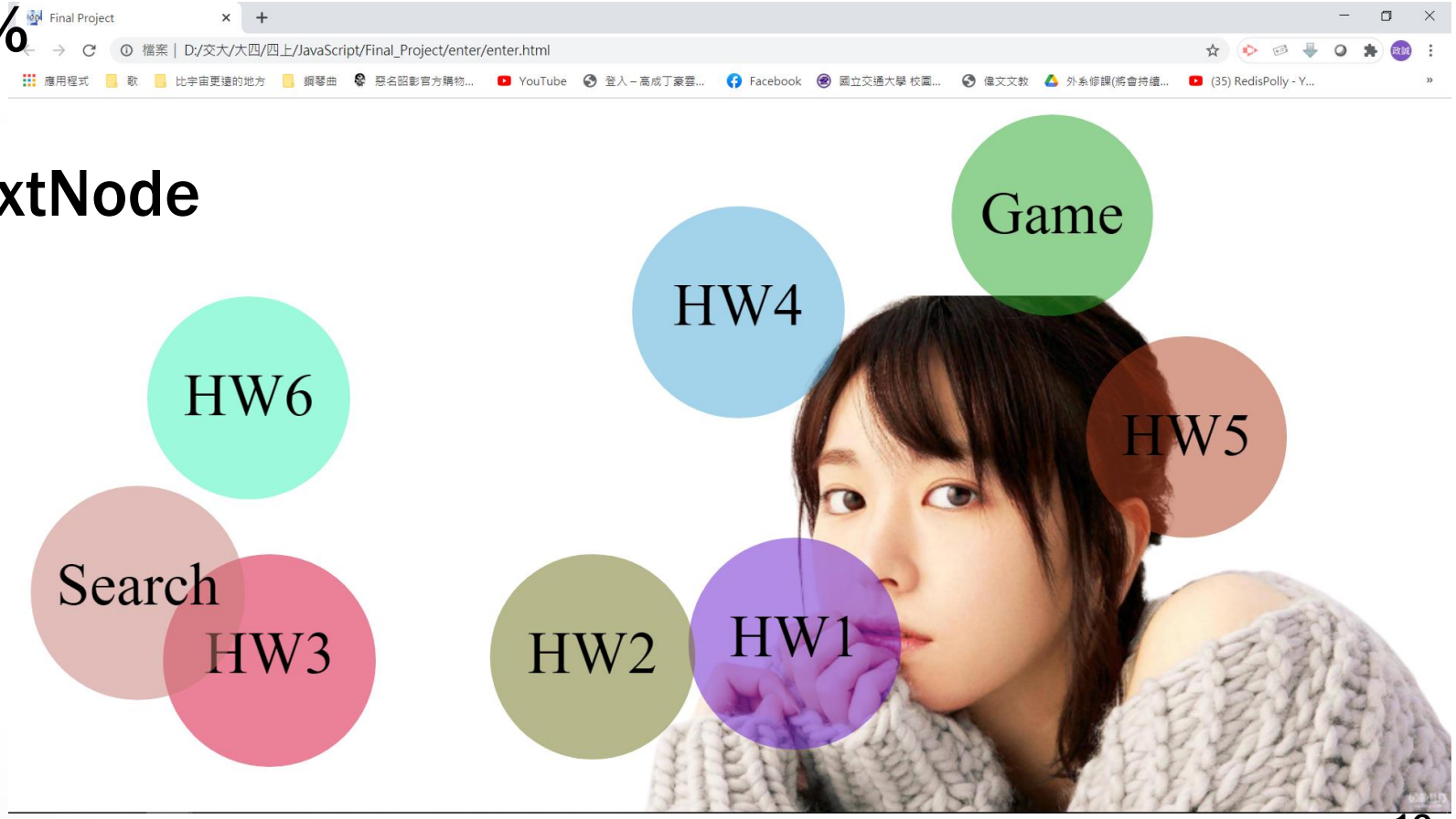
# enter.html/css/js

- border-radius: 100%

- document.createTextNode

- randint - ±speed



# enter.html/css/js

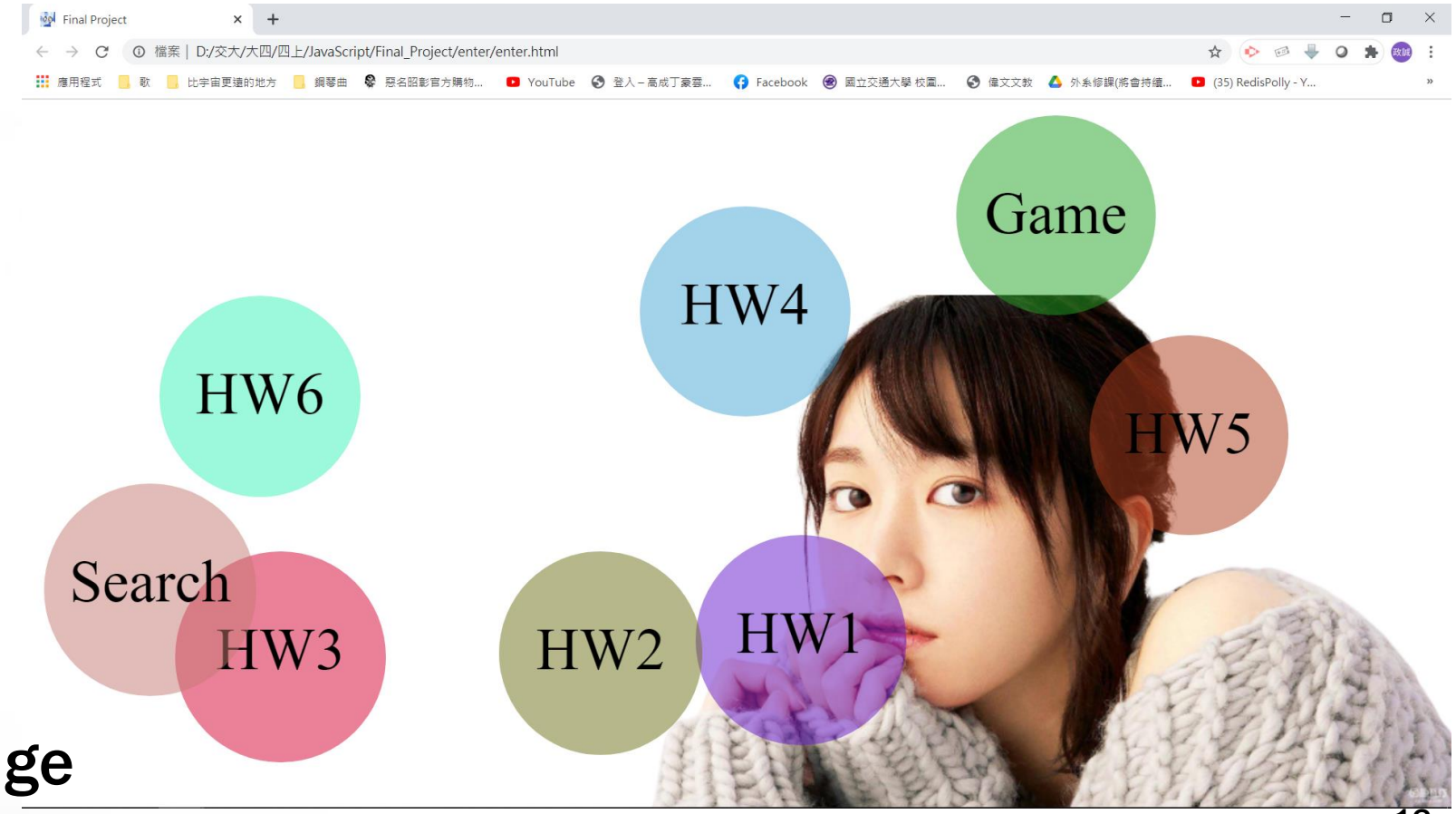
- distance

- click event

- e.clientX, e.clientY

- :hover, :active

Back To Homepage
Back To Previous Page

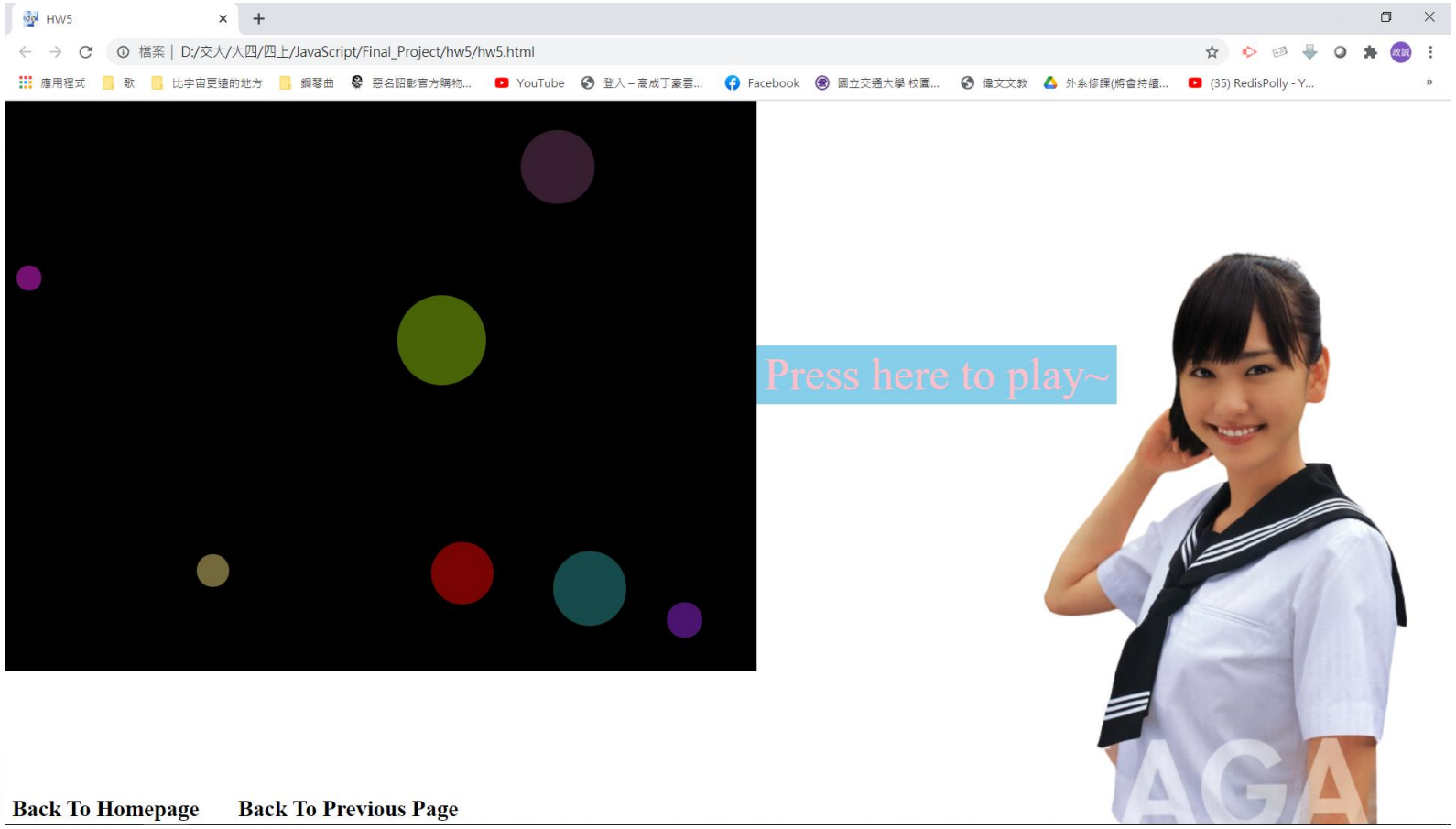


# hw1.html/css/js

- option value

# hw5.html/css/js

- input button



# Functionality & Coding Structure

1. Coverage => start.html
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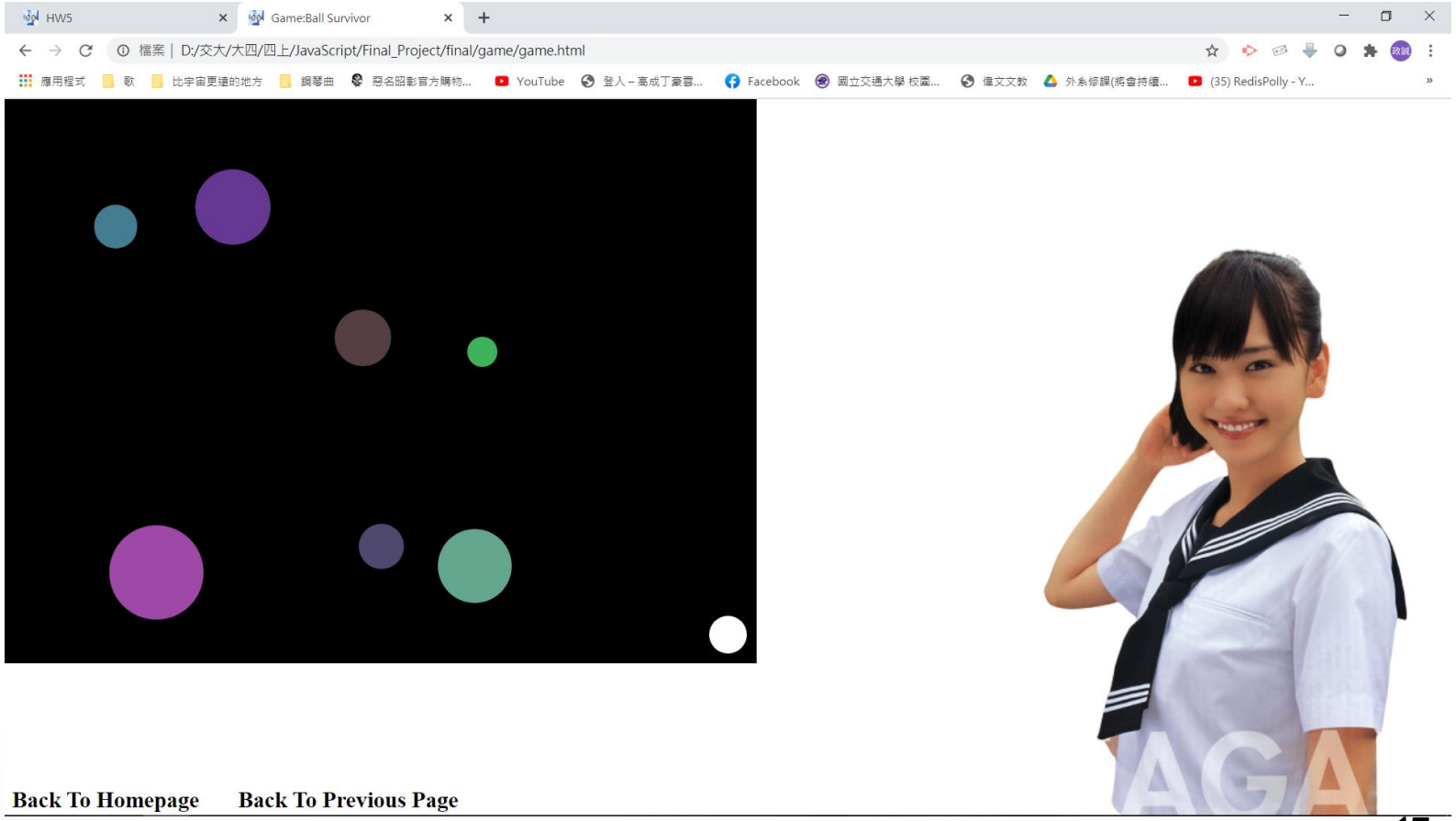
# game.html/css/js

## Survivor Ball

- var

- Ball()[Enemy ball]

- PlayBall()[Our ball]



# game.html/css/js

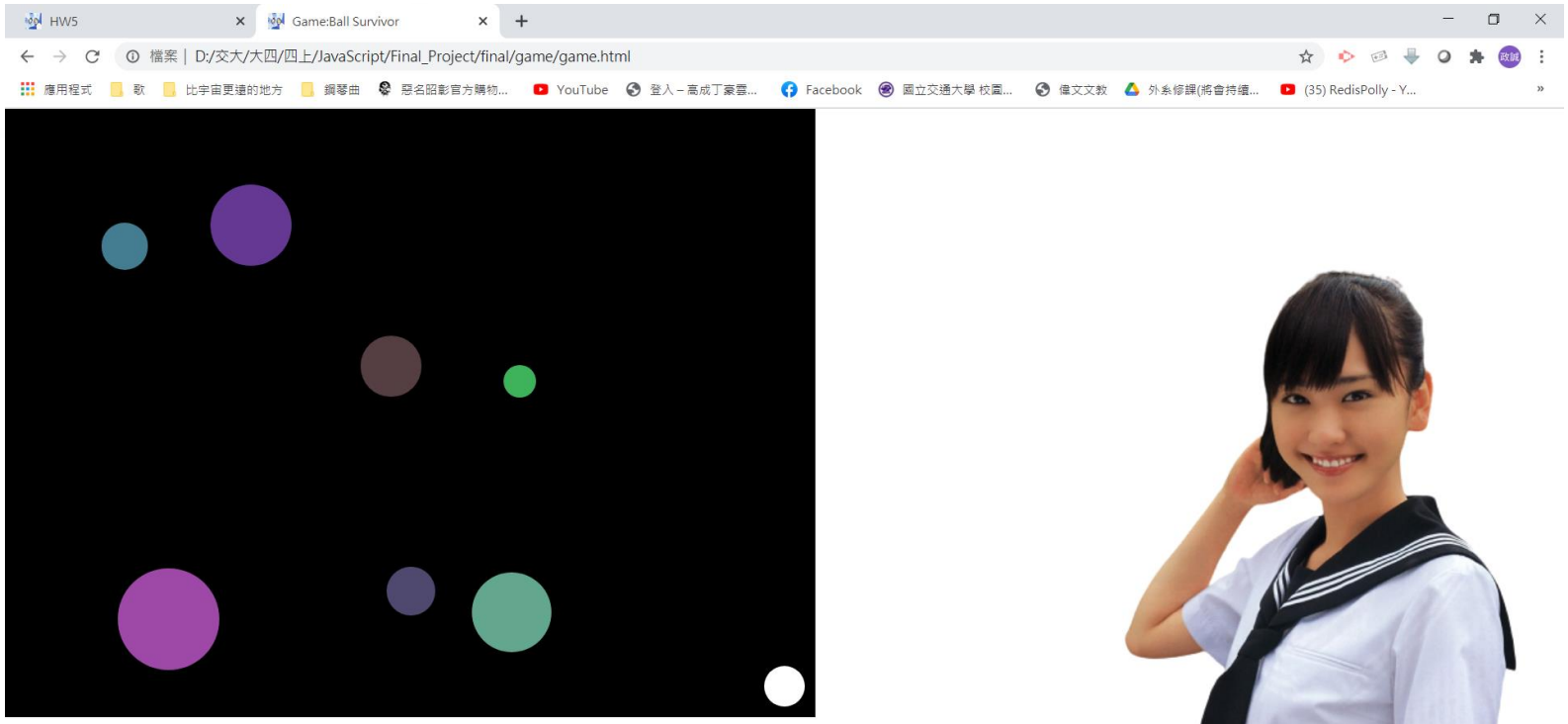
**Survivor Ball** – move

- setInterval()

- left/.top

- keydown/up event

- Press multiple key
  (Processing key clearInterval)
  (Multiple key setInterval at almost the same time)

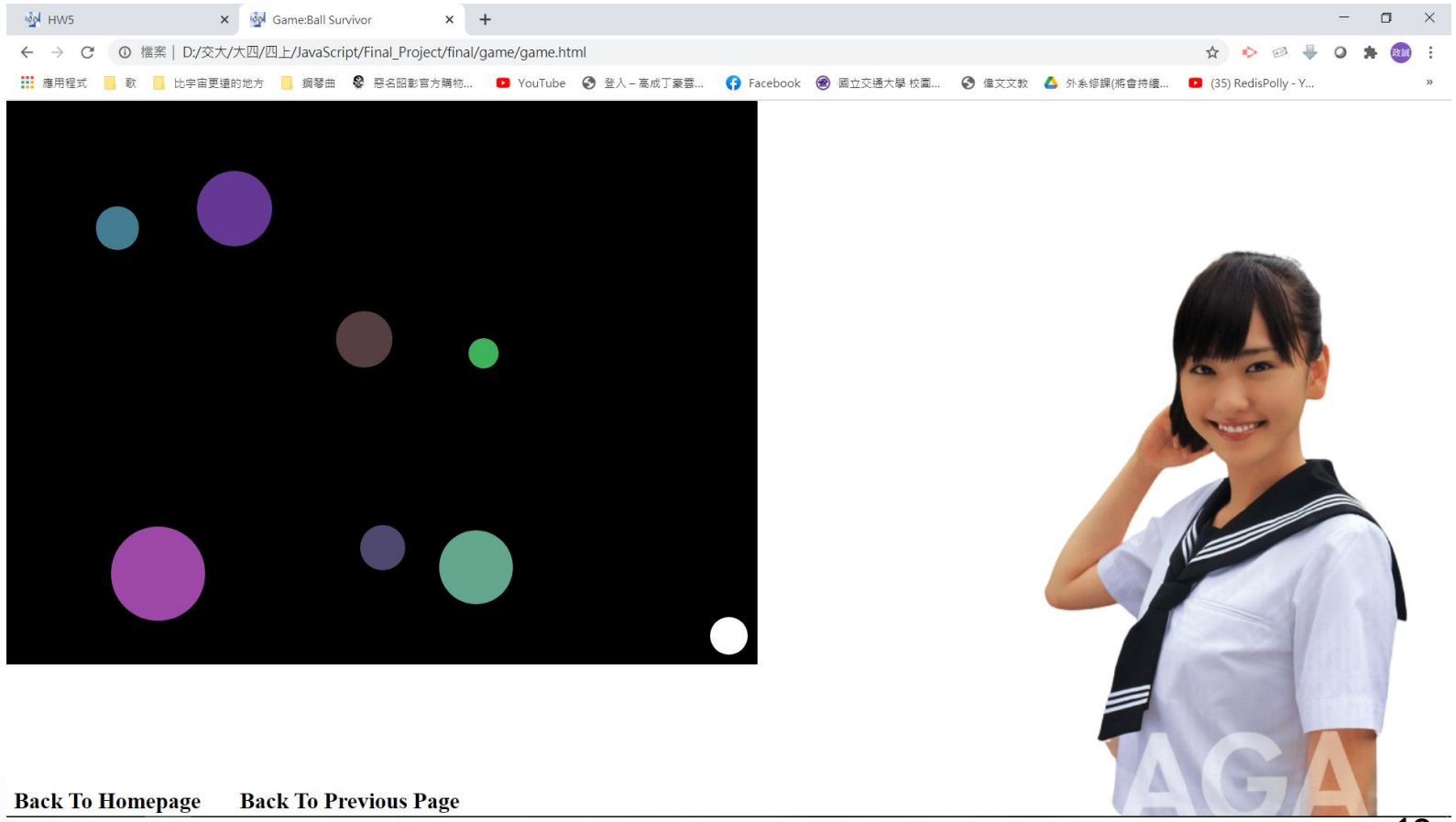


# game.html/css/js

**Survivor Ball** – collision

- for

- distance

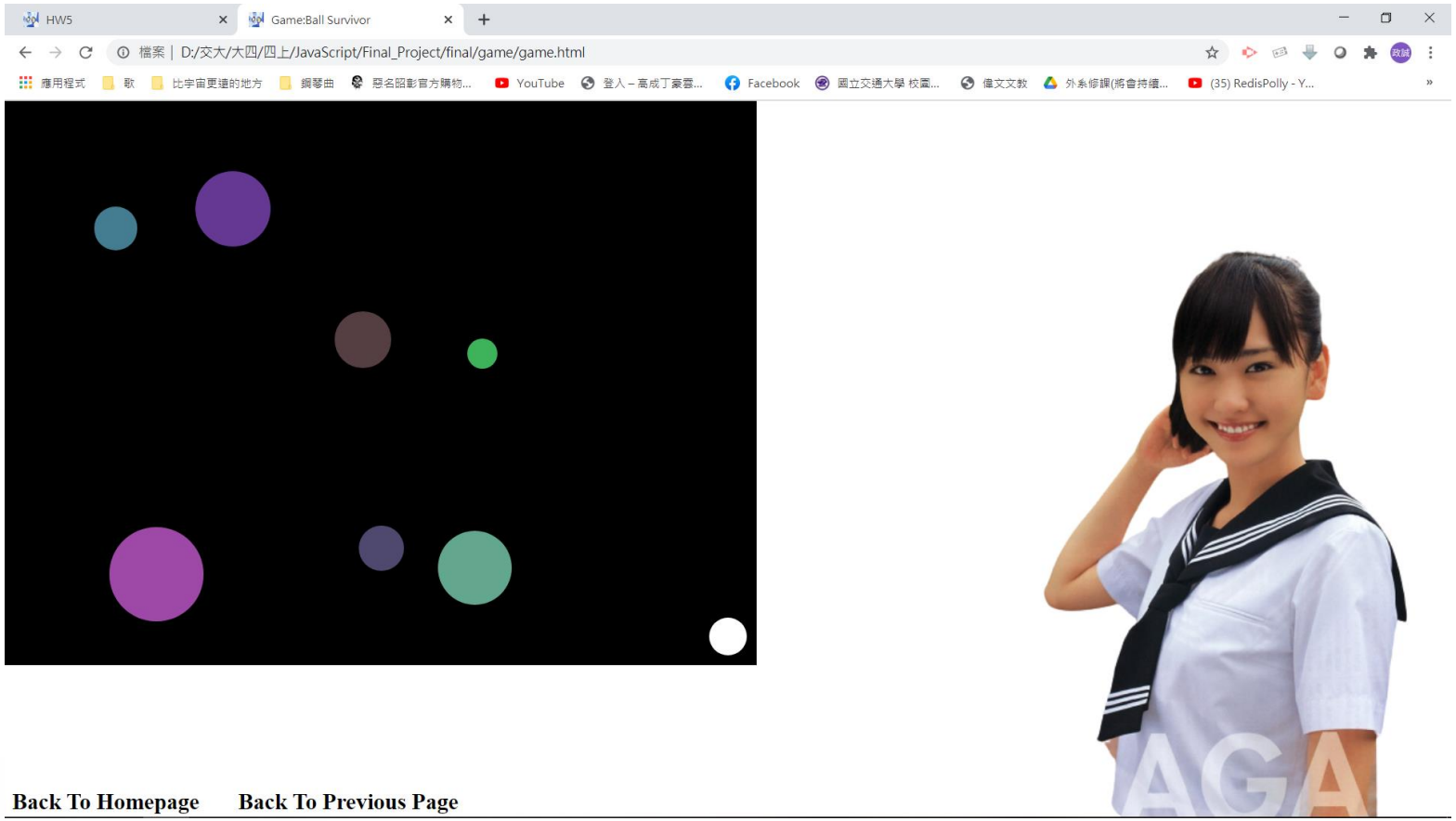


# game.html/css/js

**Survivor Ball** – challenge

- var

- balls,count,point



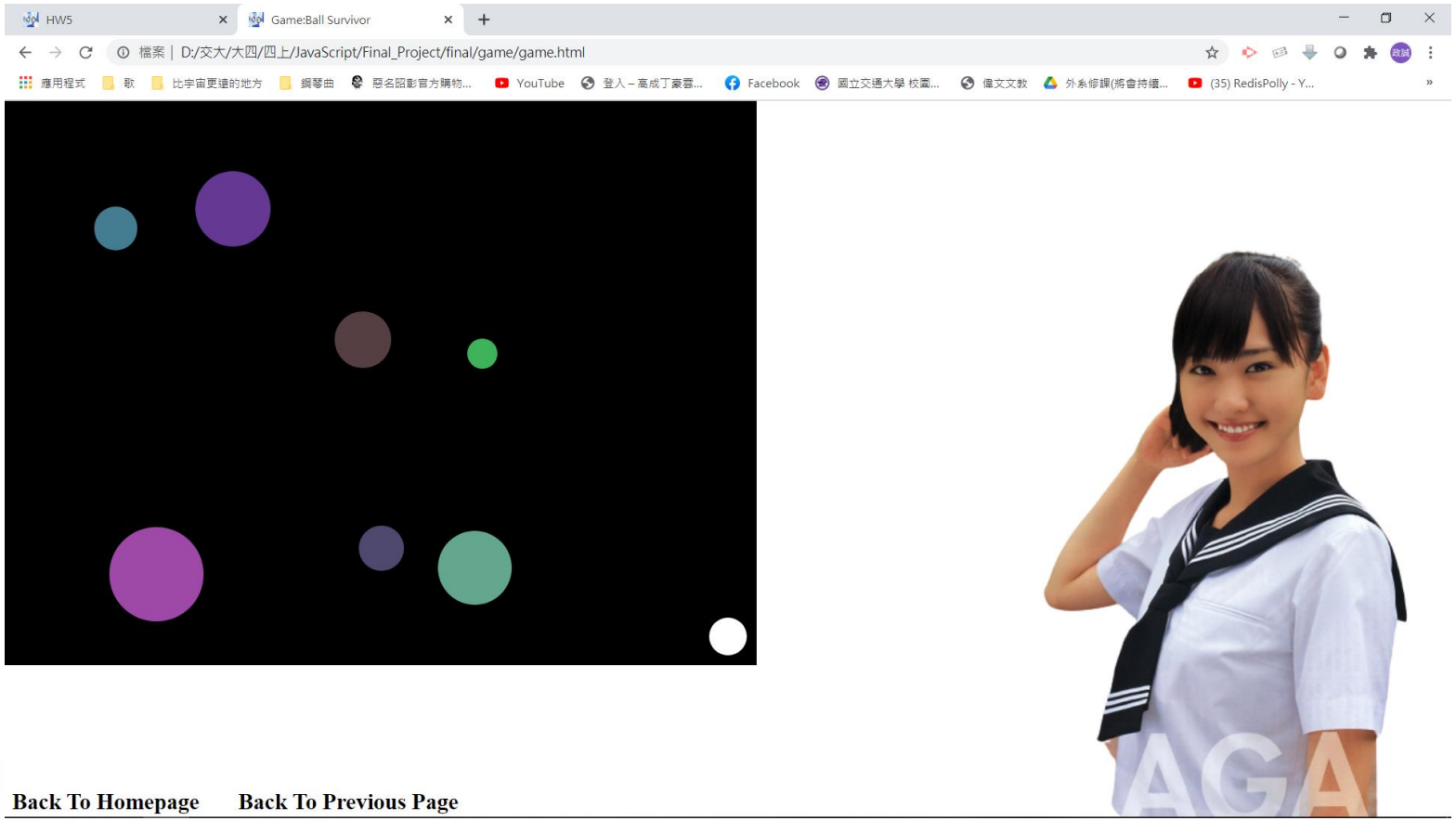
# game.html/css/js

Survivor Ball-Game Over

- radius – distance

- clearInterval()

- confirm()
  - Play Again
  - Homepage



# game.html/css/js

**Survivor Ball-Game Over**

- radius – distance

- clearInterval()

- confirm()
  - Play Again
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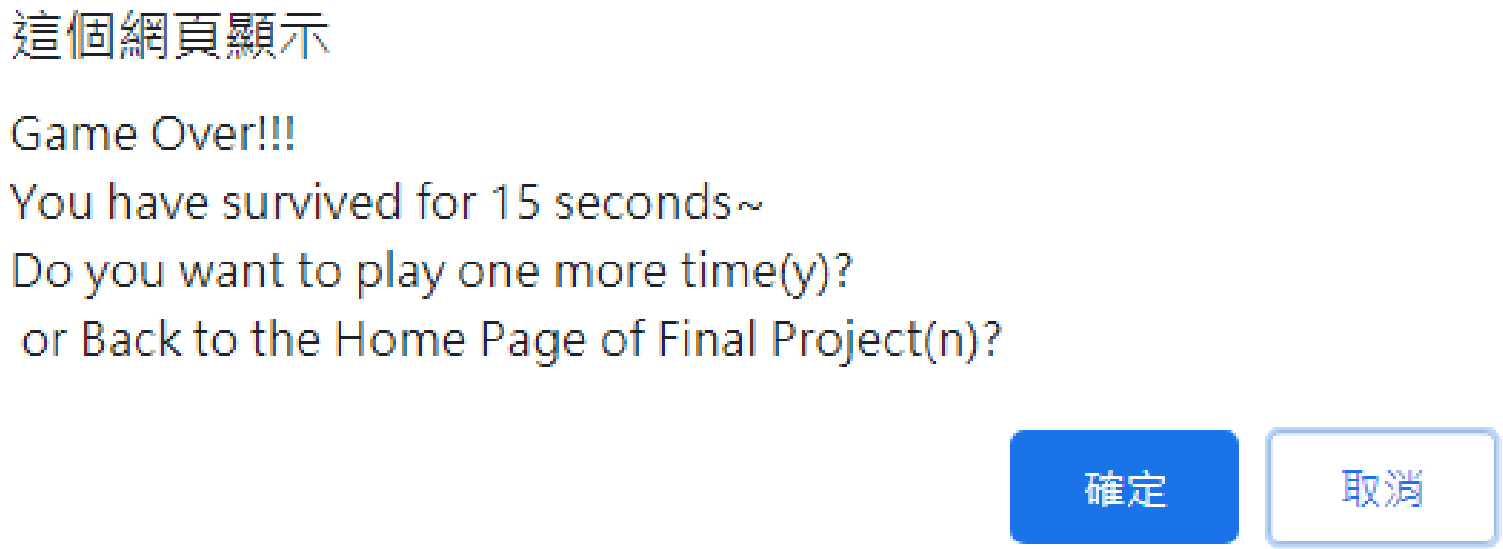
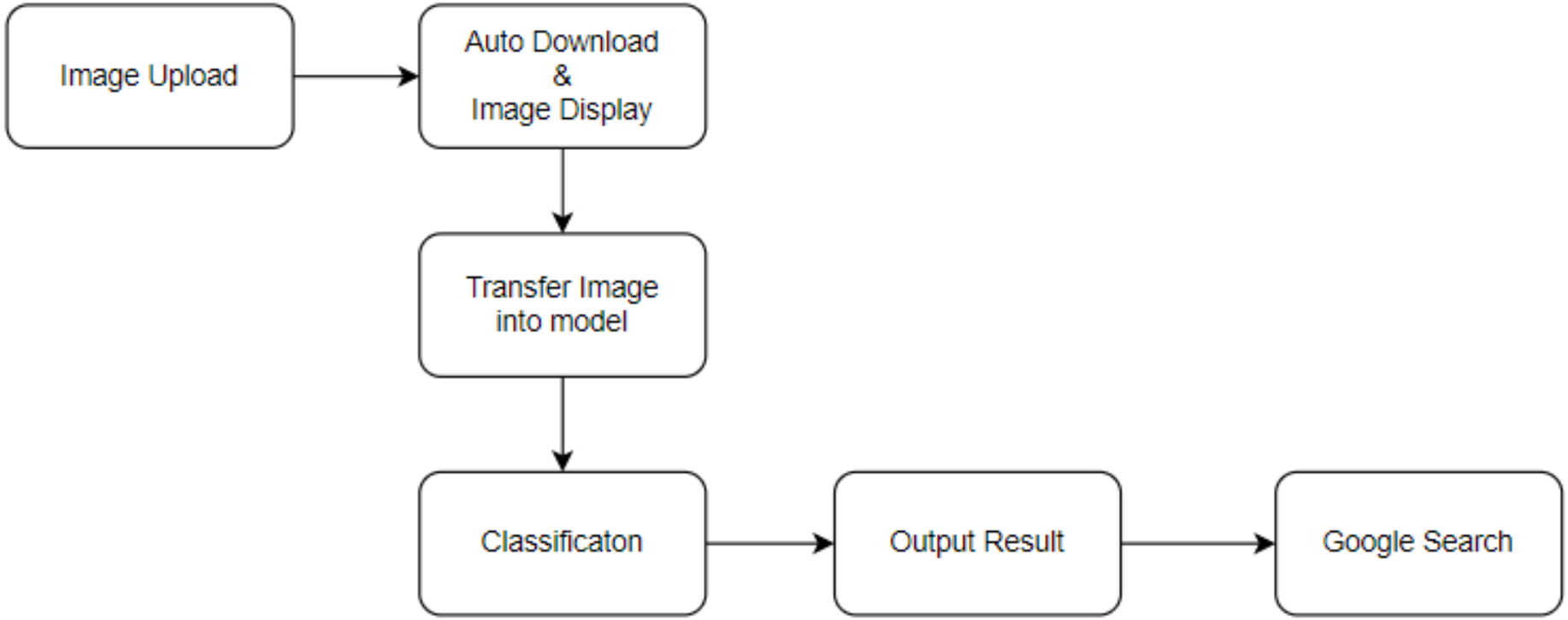


# Functionality

1. Coverage => start.html
2. Transmission => enter.html / hw.html
3. Game => game.html
4. **Animal Image Reverse Search => Search.html**

# Animal Image Reverse Search



# Image Upload

```
<input type="file" accept="image/*" onchange="loadFile(event)">
<img id="output" />
```

- Use accept to receive uploaded image

- Use onchange to trigger download & display

- Assign id = “output” to image to help grasp specific information

# Image Display

```
// use canvas to display uploaded image
output.onload = function () {
    var canvas = document.createElement('canvas')
    canvas.width = output.width
    canvas.height = output.height
    var context = canvas.getContext('2d')
    context.drawImage(output, 0, 0, output.width, output.height)
```

- Create canvas and draw with info of uploaded image

# Auto Download

```
//transfer the url into jpeg format
var url = canvas.toDataURL('image/jpeg')
// create an element to download the image automatically
var a = document.createElement('a')
var event = new MouseEvent('click')
a.download = 'image.jpg'
a.href = url
// trigger the downloading event
a.dispatchEvent(event)
```

- Create element ‘a’ and trigger the download event

Search.html

File | C:/tfjs/Search.html

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# Animal Image Reverse Search

Step: 1
Submit the image you want search
Step: 2
Execute model.bat in folder (tfjs)

Choose File wolf.jpg

## Back To Homepage Back To Previous Page



image.jpg

Show all

# Image Transfer

```
// make the input image into tensors
const imageToInput = (image, numChannels) => {
  const values = imageByteArray(image, numChannels)
  const outShape = [image.height, image.width, numChannels];
  const input = tf.tensor3d(values, outShape, 'int32');

  return input
}
```

- Construct predictable input image (tensor)

# Classification & Output

```
const classify = async (path) => {
  // read image and transfer into suitable input
  const image = readImage(path)
  const input = imageToInput(image, NUMBER_OF_CHANNELS)

  // load pretrained and classify the image
  const  mn_model = await loadModel()
  const predictions = await mn_model.classify(input)

  // output result
  const result = predictions[0].join()
  console.log(result)
```

- Load mobilenet model with trained weights and predict
- Turn the result into pure characters for easy calling

# Google Search

```
  // search the result with google
  open("https://www.google.com/search?q=" + result + "&rlz=1C1NHXL_

  // use fs to remove image for avoid data overlapping
  remove_file(path)
}
```

- Use open() to execute google search for the result of classification
- Eliminate downloaded image to avoid target overlapping

Search.html

timber wolf, grey wolf, gray wolf,

google.com/search?q=timber%20wolf,%20grey%20wolf,%20gray%20wolf,%20Canis%20lupus&rlz=1C1NHXL_zh-TWTW762TW762&oq=dog&aqs=chrome..69i57j0i433l2j0i131i433j0i43...

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Google

timber wolf, grey wolf, gray wolf, Canis lupus

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約有 578,000 項結果 (搜尋時間：0.79 秒)

Gray wolf, (Canis lupus), also called timber wolf, largest wild member of the dog family (Canidae). It inhabits vast areas of the Northern Hemisphere. Between 5 and 24 subspecies of gray wolves are recognized in North America and 7 to 12 are recognized in Eurasia, with 1 in Africa. 2020年11月5日

www.britannica.com › ... › Dogs & the Canine Family

gray wolf | Size, Habitat, Diet, Predators, & Facts | Britannica

關於精選摘要 • 意見回饋

查看以下內容的搜尋結果：

東加拿大狼
動物

其他人也問了以下問題

Is a timber wolf a GREY Wolf?

Is a Gray Wolf a vertebrate?

How smart are GREY wolves?

Are GREY wolves aggressive?

意見回饋



image.jpg

Show all

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# Division of Work

林政誠:
- Coverage (start)主要編寫及設計
- enter主要編寫及設計
- 主要視窗架構和附加功能設計
- 網頁流程主要設計
- Survivor Ball主要編寫及設計
- 視覺優化(css)

吳峻陞:
- Search功能和畫面設
- model模擬和訓練及其餘相關參數設定
- nodejs相關程式編寫及環境設定
- 主機和網頁互動設計
- 視覺優化(css)

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