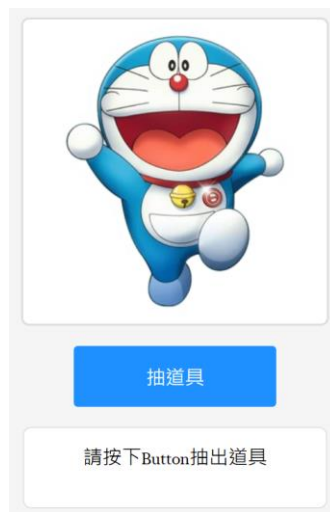# Exercise 7

1. Please develop a web app to randomly select a Doraemon gadget (請開發一個抽取哆啦 A 夢道具的程式) based on the following resources:
   - 10 PNG images of gadgets
   - Doraemon sound effects
   - A string containing 10 gadget names: "任意門 時光機 竹蜻蜓 時光布 記憶麵包 縮小燈 翻譯蒟蒻 如果電話亭 穿透環 更衣照相機"

   (1) Initial UI: (Please show 00.png)

   (2) When the user presses [Draw Gadgets], the program will randomly select one of the 10 gadgets and display it on the screen. The program first turns the screen to a gray background and plays Doraemon's sound effects. After the playback is completed, the picture and name message of the gadget will be displayed, as shown below:
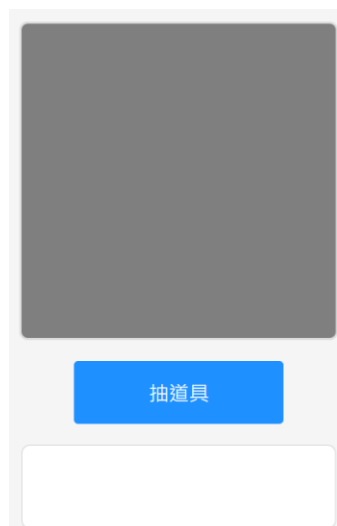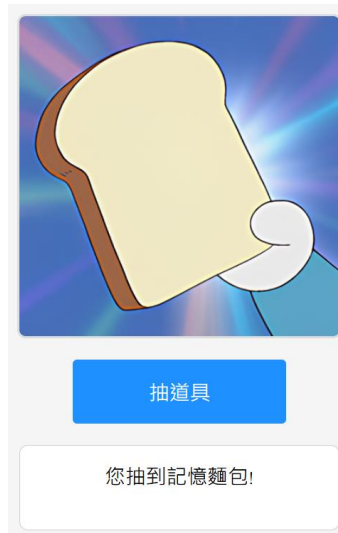
(3) The user can press the [Draw Gadgets] button again to repeat the above step.

Hint:

(1) Please refer to ex-7-1-partial.html first.

(2) For the gray background effect, you can use "blank.jpg".

(3) Please refer to Fig. 9.7 to understand how audio is used, especially the usage of the "ended" event.

(4) Please use Math.random() to obtain random numbers to determine random gadgets.

(5) Please convert from string to array: https://www.w3schools.com/JSREF/jsref_split.asp.

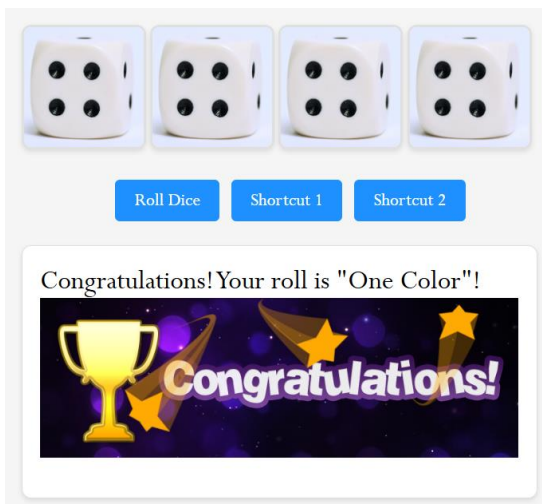(Sources of images: http://chinesedora.com/gadget/doraemon-gadget-top30)

2. Please develop a dice game based on ex-6-1-partial.html:
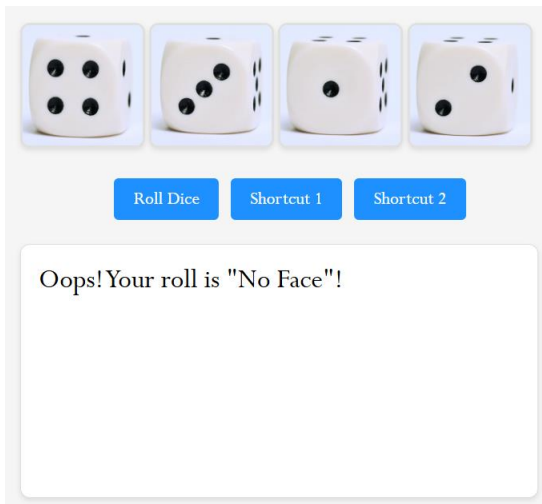
   Basic Requirements:

   ▪ Initial UI:
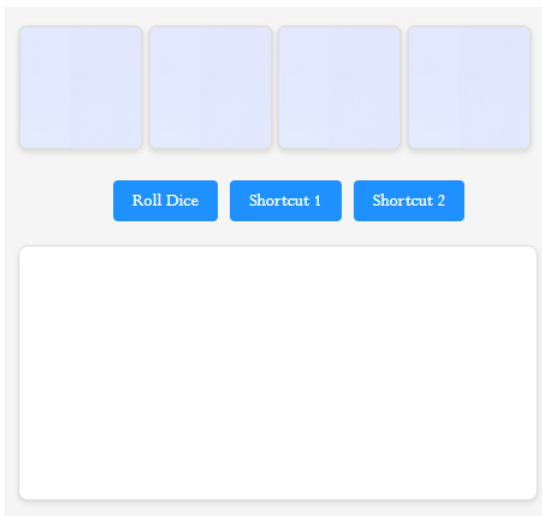
   ▪ Detect "一色 (One Color)": if four dice have the same face value, please show the *congratulation* message and image.

   ▪ Detect "無面 (No Face)": if the face values of four dice are totally different, please show the corresponding *OOPS* message.
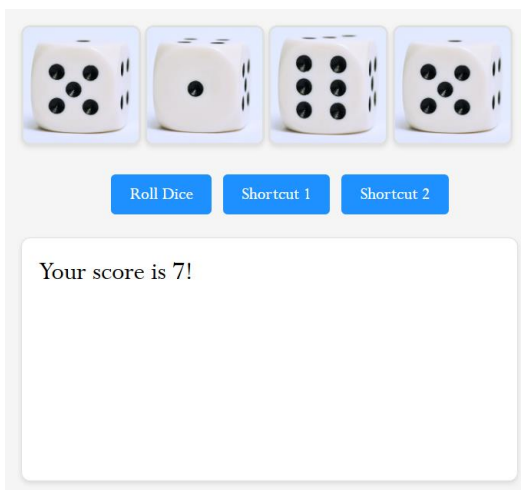

- Add a new button "Shortcut" to directly produce the result of "一色 (One Color)".
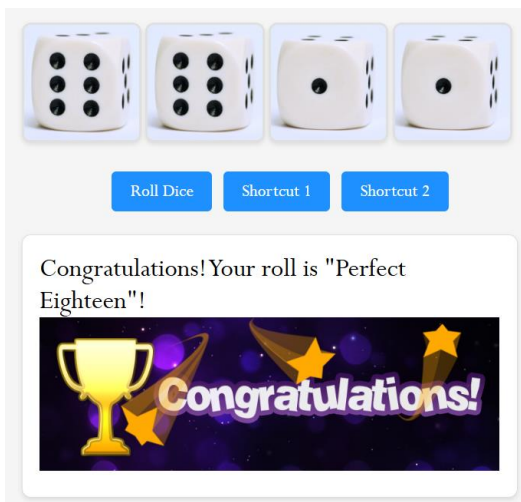
Advanced Requirements:

- Detect "No decision": three dice have the same face value, but the other one is different.

- Compute the score based on the game rules: if two dice have the same face value, the score is the sum of the face values for the other two dice.

- Detect "十八 (Perfect Eighteen)"：if the score is the maximum (12), please also show the "十八" message and the congratulation image.

- Add a new button "Shortcut2" to directly produce the result of "十八 (Perfect Eighteen)".

Hint:

- Please refer to Fig. 9.5 and make use of variables: *die1Value, die2Value, die3Value,* and *die4Value.*
- The game rule: https://zh.m.wikipedia.org/zh-tw/十八仔.
- Array is not required. (But using array is acceptable)