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1. **在上一次現場題你所遇到的問題和學到的東西(問題與討論)**

I learn that when we need to new a URL object, we need to write it inside the try and catch block.

**二.在本次的作業所遇到的問題和學到的東西(問題與討論)**

**1.** I learned how to receive the input and display the output in command window.

**2.** I learned to define a drive class in another file, and understood how setVisible works.

**3.** I learned to use array in JAVA and had a better understanding of static function/method.

**作業：(第二題(a))**

**Case I**: In this case, the random function is written inside the paint function. So, every time we resize the window, the setVisible function is called, and the paint function will be called automatically, then the numbers array will renew the values it contains. And because of that, we can see that the bars are changing when we are adjusting the size of the window. (Both the bars at left hand side and at right hand sides)

**Case II**: In this case, the random function is written inside the constructor of class SortFrame2 and outside the paint function, so the values that numbers array contain are fixed, because the SortFrame2 class is created only once when the program is executed. And because of that, we can’t see the bars changing when we are adjusting the size of the window.

**Case III**: In this case, the class SortPanel101 is extended from class JPanel,

and it contains a method name paintComponent, which also does the job of displaying the results. In order to use the user-defined class SortPanel101, an object name w which is an instantiation of class JFrame is declared in main function. However, because the random function is written inside the constructor of SortPanel101, the values that the numbers array contain can’t be change after the class is constructed. So, we can’t see the bars changing when we adjusting the size of the window.

**Case IV**: In this case, a class name DrawSortTest is defined in another file served as a drive class of class SortPanel. And because the random function is written inside the paintComponent function, so every time we resize the window, the setVisible function is called, and the paintComponent function will be called automatically, then the numbers array will renew the values it contains, so that we can see that the bars are changing when we are adjusting the size of the window. (Both the bars at left hand side and at right hand sides)