

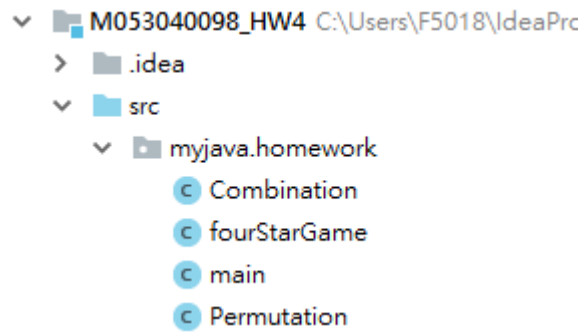
【2018 JAVA 物件導向程式設計 Homework 4】

● 注意事項

1. 請使用 JAVA 語言，配合 IntelliJ IDEA 寫本次作業並進行測試，並安裝、使用 JAVA SE Development Kit(JDK) 8 函式庫。
2. 請依據作業規定設定 IntelliJ IDEA 專案名稱與 package name，若未依照規定將根據狀況扣分。
3. 嚴禁抄襲其他同學作業，參與者(抄襲與被抄襲)均以零分計算。
4. 請對你的程式碼有深入瞭解，demo 時助教會問。
5. 對題目有問題可以寄信問助教群(java_ta@net.nsysu.edu.tw)或是到實驗室(EC5018)詢問，但不幫忙 debug。
6. 逾期以零分計算，不接受補交，有任何因素導致無法如期繳交，請事先告知；Demo 時間會另外通知。

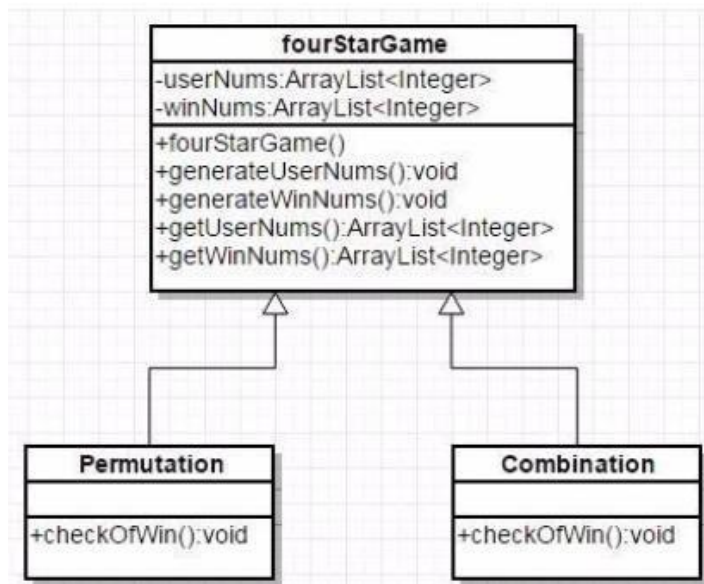
● 作業規定與上傳

1. IntelliJ IDEA 專案名稱:<學號>_HW4
2. Package path : myjava.homework
3. 作業請繳交專案之 tar 或 zip archive 並上傳至網路大學。
4. 請於 2018 年 4 月 8 日(週日) 23:59 前上傳完畢，逾期以零分計算，不接受補交，再次強調，有任何因素導致無法如期繳交，請事先告知，Demo 時間另外通知。
5. Example of package explorer(請根據作業規定修改):



- 提示：此次作業需參考到 **UML**。請注意、+、-、_，都是有意義的。可以參考此 Wiki 之 Members 章節說明:Class Diagram(Wikipedia)

● Homework Explanation



1. According to the class diagram above, please develop a simple 4-Star game.
2. In Class **fourStarGame**, there are two `ArrayList` – `winNums` is used to store four lucky numbers, and `userNums` is used to store 4 numbers from user input.
 - A. Method `generateUserNums` is used to store 4 numbers from user input to `userNums`.
 - B. Method `generateWinNums` is used to randomly generate 4 non-duplicate and ranged in 0~9 numbers and store them to `winNums`.
 - C. Method `getUserNums` is used to return the `userNums`.
 - D. Method `getWinNums` is used to return the `winNums`.
3. Class **Permutation** is inherited from Class **fourStarGame**.
 - A. Method `checkOfWin` is used to check if the 4 numbers in `userNums` are the same with the 4 numbers in `winNums`. (Must in the same order)
4. Class **Combination** is inherited from Class **fourStarGame**.
 - A. Method `checkOfWin` is used to check if the 4 numbers in `userNums` are the same with the 4 numbers in `winNums`. (Order is not necessarily the same)
5. Please make sure user input is correct and the program is stable.

● Sample Output

Permutation

```
Choose your Four Star Game type : (1:Combination 2:Permutation 3: Exit)
2
Win numbers : 5 3 1 0
Input four user numbers : 5 3 1 0
**You win!
Choose your Four Star Game type : (1:Combination 2:Permutation 3: Exit)
2
Win numbers : 2 1 8 0
Input four user numbers : 0 1 2 8
**You lose!
Choose your Four Star Game type : (1:Combination 2:Permutation 3: Exit)
2
Win numbers : 5 9 0 4
Input four user numbers : 5 9 0
Wrong input, try again.
```

Combination

```
Choose your Four Star Game type : (1:Combination 2:Permutation 3: Exit)
1
Win numbers : 6 1 8 4
Input four user numbers : 1 4 6 8
**You win!
Choose your Four Star Game type : (1:Combination 2:Permutation 3: Exit)
1
Win numbers : 7 6 0 5
Input four user numbers : a b c d
Wrong input, try again.
Choose your Four Star Game type : (1:Combination 2:Permutation 3: Exit)
3
```