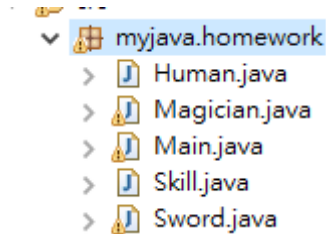


## [2016 JAVA 物件導向程式設計 Homework 6]注意事項

1. 請使用 JAVA 語言，配合 **Eclipse** 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 Eclipse 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](mailto: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。
7. Demo 時間會另外通知。

### 作業規定與上傳

1. Eclipse 專案名稱：**<學號>\_HW6**

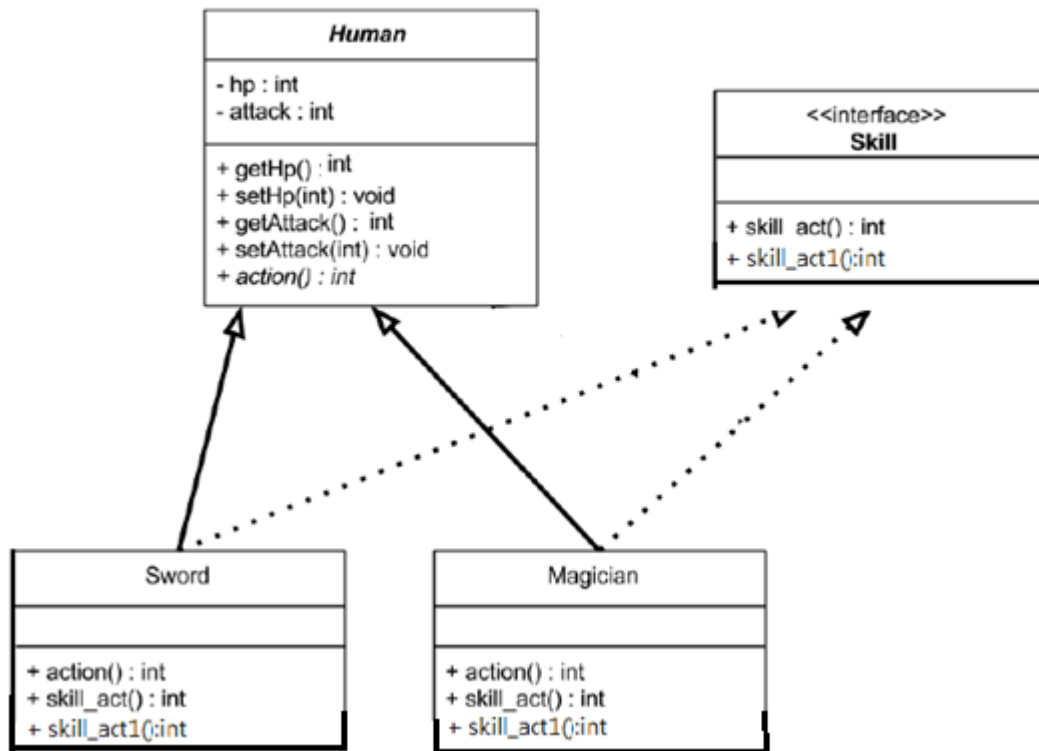


2. Package path：請參考右圖
3. 作業請繳交專案之 **tar** 或 **zip archive** 並上傳至網路大學
4. 請於 **2016 年 4 月 25 日 (週一) 23:59** 前上傳完畢，逾期以零分計算，不接受補交，如有任何因素導致無法如期繳交，請事先來信告知。
5. Example of eclipse package explorer (請依據作業規定修改)

**提示：此次作業須參考UML圖完成，請注意UML圖中+, -, # etc. 斜體字都是有意義的**

## 作業說明

### ●作業說明



1. 請依據上方 UML diagram 實作一個簡單的文字遊戲

1. Follow the UML diagram and implement the game.

2. Human 為抽象類別，其中含有一個抽象方法 action()，Skill 為 interface

2.” Human” is a abstract class, including a abstract method  
“action()” ;” Skill” is a interface.

2. 底下兩個類別：劍士和法師，分別繼承 Human 與實作 Skill

3.The following two classes, which are inherited by the class “Human” and implement the interface “Skill”, are “Sword” and “Magician” .

A. action() 方法用來實作角色的行動，劍士可以攻擊、防禦、使用技能，法師可以防禦、使用技能

A. The method “action()” is to implement the role’ s action, e.g., swords can attack, defend, and use the skills; magicians can defend, and use the skills.

B. skill\_act() 和skill\_act1()方法用來實作技能，以下為各角色行動與技能範例

B. The method “skill\_act()” and “skill\_act1()” is to implement the skills.  
The figure shown as below is to show every role’ s action and the skills

### 劍士

- (1)攻擊:攻擊怪物
- (2)防禦:擋下所有攻擊
- (3)攻擊力兩倍:你將永久提高攻擊
- (4)全力一擊:你可以造成100-450的傷害,但HP會變成1且之後不能攻擊.

### 法師

- (1)防禦:擋下所有攻擊
- (2)火焰魔法:可以對怪物造成 $3.5 * \text{attack}$
- (3)治癒:可隨機回復1-30HP

### Sword

- (1)attack: hit the monster
- (2)defend :defend all the damage
- (3)attack\*2: your attack can cause double damage
- (4)Powerful attack: you can cause the damage range from 100 to 450. However, when your "hp" becomes to one, you can not attack.

### Magician

- (1) defense :defend all the damage
- (2) fire : hit the monster  $3.5 * \text{attack}$
- (3)treatment: resume 1-30 hp.

4. 最後實作Main完成此程式，遊戲初始設定及流程請參考以下實作，在建立角色時，限制使用多型(Polymorphism)的方式建立，例如：Human h = new Sword();

4. In Main function, you need to initialize the game. Moreover please follow the rule, you must use Polymorphism when building roles (e.g., Human h = new Sword(); ).

### 流程:

#### Flows:

1. 程式執行時會隨機產生一個血量為 150-300 的怪物。
1. When the program runs, it will produce one monster whose hp is range from 150 to 300 randomly。
2. 你可以選擇兩種職業
2. There are two kinds of occupation can be chosen.
  - (1)劍士 : 攻擊力 30 血量 100
  - (1)Sword : attack 30, hp 100
  - (2)法師 : 攻擊力 20 血量 50
  - (2)Magician: attack 20, hp 50

### 3. 進入戰鬥 採同時攻擊制

怪物會隨機造成 0-40 的傷害(如果劍士使用技能 4 此回合不會受到攻擊但之後都不可以再攻擊怪物)

3. When the fight starts, the monsters and the roles will attack each other at the same time.(P.S.: If swords use Skill 4, they won't be attacked in that round, but they can not attack monsters in the future round. )

4. 結局:當有一方生命值为 0 或是同時為 0

4. Game over: Either the monsters or the roles died(hp = 0).

```
Monster's HP:259
Choose your character(By default Sword) (1)Sword(2)Magician: 1
Role Hp:100
choose(Default attack) (1)attack(2)defend(3)attack*2 (4)Powerful attack :1
Role's damage :30
Monster's damage:6
Role Hp:94
Monster HP:229
choose(Default attack) (1)attack(2)defend(3)attack*2 (4)Powerful attack :2
defend all the damage
Monster's damage:10
Role Hp:94
Monster HP:229
choose(Default attack) (1)attack(2)defend(3)attack*2 (4)Powerful attack :3
Now,your damage :60
Monster's damage:36
Role Hp:58
Monster HP:229
choose(Default attack) (1)attack(2)defend(3)attack*2 (4)Powerful attack :7
Role's damage :60
Monster's damage:27
Role Hp:31
Monster HP:169
choose(Default attack) (1)attack(2)defend(3)attack*2 (4)Powerful attack :4
Power!!!Role's damage :213
Monster's damage:22
Role Hp:1
Monster HP:0
Win
```

```
Monster's HP:247
Choose your character(By default Sword) (1)Sword(2)Magician: 1
Role Hp:100
choose(Default attack) (1)attack(2)defend(3)attack*2 (4)Powerful attack :4
Power!!!Role's damage :244
Monster's damage:15
Role Hp:1
Monster HP:3
Monster's damage:16
Role Hp:0
Monster HP:3
Lose
```

Monster's HP: 230  
Choose your character(By default Sword) (1)Sword(2)Magician: 1  
Role Hp:100  
choose(Default attack) (1)attack(2)defend(3)attack\*2 (4)Powerful attack :3  
Now,your damage :60  
Monster's damage:36  
Role Hp:64  
Monster HP:230  
choose(Default attack) (1)attack(2)defend(3)attack\*2 (4)Powerful attack :3  
Now,your damage :120  
Monster's damage:26  
Role Hp:38  
Monster HP:230  
choose(Default attack) (1)attack(2)defend(3)attack\*2 (4)Powerful attack :3  
Now,your damage :240  
Monster's damage:28  
Role Hp:10  
Monster HP:230  
choose(Default attack) (1)attack(2)defend(3)attack\*2 (4)Powerful attack :1  
Role's damage :240  
Monster's damage:38  
Role Hp:0  
Monster HP:0  
Deuce|

Monster's HP: 289  
Choose your character(By default Sword) (1)Sword(2)Magician: 2  
Role Hp:50  
choose(Default for the defense) (1)defend(2)fire (3)treatment:1  
defend all the damage  
Monster's damage:13  
Role Hp:50  
Monster HP:289  
choose(Default for the defense) (1)defend(2)fire (3)treatment:2  
Role's damage :70  
Monster's damage:13  
Role Hp:37  
Monster HP:219  
choose(Default for the defense) (1)defend(2)fire (3)treatment:3  
HP increase :28  
Monster's damage:2  
Role Hp:63  
Monster HP:219  
choose(Default for the defense) (1)defend(2)fire (3)treatment: