

← implements

← extends

interface Character

- void showInfo(): show stat only
- void attack(Character _): โจมตี
- void beAttacked(double _): ถูกโจมตี
- void equip(String _): ใส่/ใส่ Accessory
- void unEquip(String _): ถอด Accessory
- void upgrade(String _): upgrade Accessory
- boolean isDead(): ใ้บ่งบอกว่าตัวละครนั้นยังมีชีวิตอยู่
- int getMoney(): return money
- void setMoney(int _): update money
- double getAtk(): return atk
- void setAtk(double _): update atk
- double getDef(): return def
- void setDef(double _): update def
- double getSpeed(): return speed
- void setSpeed(): update speed

class Characters

- instance variables
 - string: name
 - int: level, money, hp, mana
 - double: atk, def, speed
 - Ring: ring
 - Boots: boots
 - boolean[] acc ใส่ Accessory ว่าง 4

class Human

- instance variables
 - Sword: sword
 - Shield: shield
- instance method
 - void strength(): ใส่ def สูงขึ้น

class Elf

- instance variables
 - Bow: bow
 - Headband: headband
- instance method
 - void stealth(): ใส่ speed สูงขึ้น

Lab 04

interface Accessory

- void upgrade(): upgrade Accessory
- int getLevel(): return level ของ Accessory
- int getUpgradePrice(): return ราคามิ้ว Accessory
- void setUpgradePrice(int _): ใส่ราคามิ้ว Accessory

class Ring

- instance variable
 - int: boostMana
- instance methods
 - int getBoostMana(): return boostMana
 - void upgrade() **Override**

class Sword

- instance variable
 - double: swordDmg
- instance methods
 - double getSwordDmg(): return swordDmg
 - void upgrade() **Override**

class Bow

- instance variable
 - double: bowDmg
- instance methods
 - double getBowDmg(): return bowDmg
 - void upgrade() **Override**

class Headband

- instance variable
 - double: hbDef
- instance methods
 - double getHbDef(): return hbDef
 - void upgrade() **Override**

class Shield

- instance variable
 - double: shieldDef
- instance methods
 - double getShieldDef(): return shieldDef
 - void upgrade() **Override**

class Boots

- instance variable
 - double: boostSpeed
- instance methods
 - double getBoostSpeed(): return boostSpeed
 - void upgrade() **Override**

class Accessories

- instance variables
 - int: level, upgradePrice

default values & formulas

<ul style="list-style-type: none">• Human<ul style="list-style-type: none">- level = 1- money = 500- hp = 100- mana = 0- atk = 10- def = 5- speed = 10	<ul style="list-style-type: none">• Ring (Human & Elf)<ul style="list-style-type: none">- boostMana (base) = 1- boostMana += level (Ring)- upgradePrice *= 2	<ul style="list-style-type: none">• Sword (Human)<ul style="list-style-type: none">- swordDmg (base) = 1- swordDmg *= $1 + 0.2 * \text{level}$- upgradePrice *= 3	<ul style="list-style-type: none">• Bow (Elf)<ul style="list-style-type: none">- bowDmg (base) = 1.2- bowDmg *= $1 + 0.1 * \text{level}$- upgradePrice *= 3
<ul style="list-style-type: none">• Elf<ul style="list-style-type: none">- level = 1- money = 500- hp = 100- mana = 0- atk = 12- def = 3- speed = 10	<ul style="list-style-type: none">• Boots (Human & Elf)<ul style="list-style-type: none">- boostSpeed (base) = 1- boostSpeed *= $1 + 0.1 * \text{level}$- upgradePrice *= 2	<ul style="list-style-type: none">• Shield (Human)<ul style="list-style-type: none">- shieldDef (base) = 1.5- shieldDef *= $1 + 0.05 * \text{level}$- upgradePrice *= 3	<ul style="list-style-type: none">• Headband (Elf)<ul style="list-style-type: none">- hbDef (base) = 1.2- hbDef *= $1 + 0.1 * \text{level}$- upgradePrice *= 3