

## Previous version

```
public abstract class Character implements CharacterActions {
    6 usages
    protected String name;
    4 usages
    private String job;
    4 usages
    private int level;
    4 usages
    protected int maxHp;
    2 usages
    protected int maxMana;
    2 usages
    protected int Strength;
    2 usages
    protected String Agility;
    2 usages
    protected int Endurance;
    2 usages
    protected int Damage;
    1 usage
    public int baseRunSpeed;
    2 usages
    public int maxRunSpeed;
    5 usages
    private Equipable equipment;
    1 usage
    private boolean isMagicianTransparent;

    20 usages  ± Piicharpa
    public int getLevel() { return level; }
    3 usages  ± Piicharpa
    public String getJob() { return job; }
```

```
public Character(String name , String job , int level , int Hp , int Runspeed , int Mana , int Strength , String Agility , int Endurance , int Damage) {
    this.name = name;
    this.Agility = Agility;
    this.job = job;
    this.level = level;
    this.maxHp = Hp;
    this.maxMana = Mana;
    this.Damage = Damage;
    this.Endurance = Endurance;
    this.Strength = Strength;
    this.maxRunSpeed = Runspeed;
    calculateAttributes();
}
```

```
public class Magician extends Character{
    1 usage  ± Piicharpa
    public Magician(int level , int Hp , int Runspeed , int Mana , int Strength , int Endurance , int Damage) {
        super( name: "Neuah" , job: "Magician" , level , Hp , Runspeed , Mana , Strength , Agility: "Fast" , Endurance , Damage);
    }
}
```

```
public static void main(String[] args) {
    // Create characters and equipment
    Character warrior = new Warrior( level: 5 , Hp: 100 , Runspeed: 60 , Mana: 60 , Strength: 90 , Endurance: 90 , Damage: 20);
    Character magician = new Magician( level: 5 , Hp: 80 , Runspeed: 80 , Mana: 100 , Strength: 65 , Endurance: 40 , Damage: 15);
}
```

## Latest version

```
public abstract class Character implements CharacterActions {
    5 usages
    private String job;
    2 usages
    private String name;
    3 usages
    private int level;
    2 usages
    private int maxHp;
    1 usage
    private int baseRunSpeed;
    5 usages
    private Equipable equipment;
    22 usages 1 override
    public int getLevel() { return level; }
    3 usages
    public String getJob() { return job; }
    2 usages
    public Character(String job, int level) {
        this.job = job;
        this.level = level;
        this.maxHp = maxHp;
        this.name = name;
        calculateAttributes();
    }
}
```

```
public Character(String job, int level) {
    this.job = job;
    this.level = level;
    this.maxHp = maxHp;
    this.name = name;
    calculateAttributes();
}
```

```
public class Magician extends Character{
    2 usages
    private int maxHp = 80;
    1 usage
    private String name;

    1 usage
    private static int maxMana = 100;
    1 usage
    private static int strength = 65;
    1 usage
    private static String agility = "fast";
    1 usage
    private static int endurance = 40;
    1 usage
    private static int damage = 10;
    1 usage
    private int defense;
    1 usage
    private Equipable equipment;
    no usages
    private boolean isMagicianTransparent;
    1 usage
    private Shield shield;
```

```
public static void main(String[] args) {
    // Create characters and equipment
    Character warrior = new Warrior( level: 5, name: "Nae");
    Character magician = new Magician( level: 5, name: "Neuah");
}
```

### NOTICE:

เปลี่ยนการรับค่า maxHp, maxMana, strength, agility, endurance และ damage เป็นการ assign default ใน character แต่ละตัวเลข เพื่อลดการใส่ input จาก user. โดยจะมีการเปลี่ยนแปลงโค้ดทั้งหมด 4 ตำแหน่งคือ

1. constructor ใน Class character
2. variable ใน Class character
3. variable ใน Class magician
4. การใส่ input ใน main