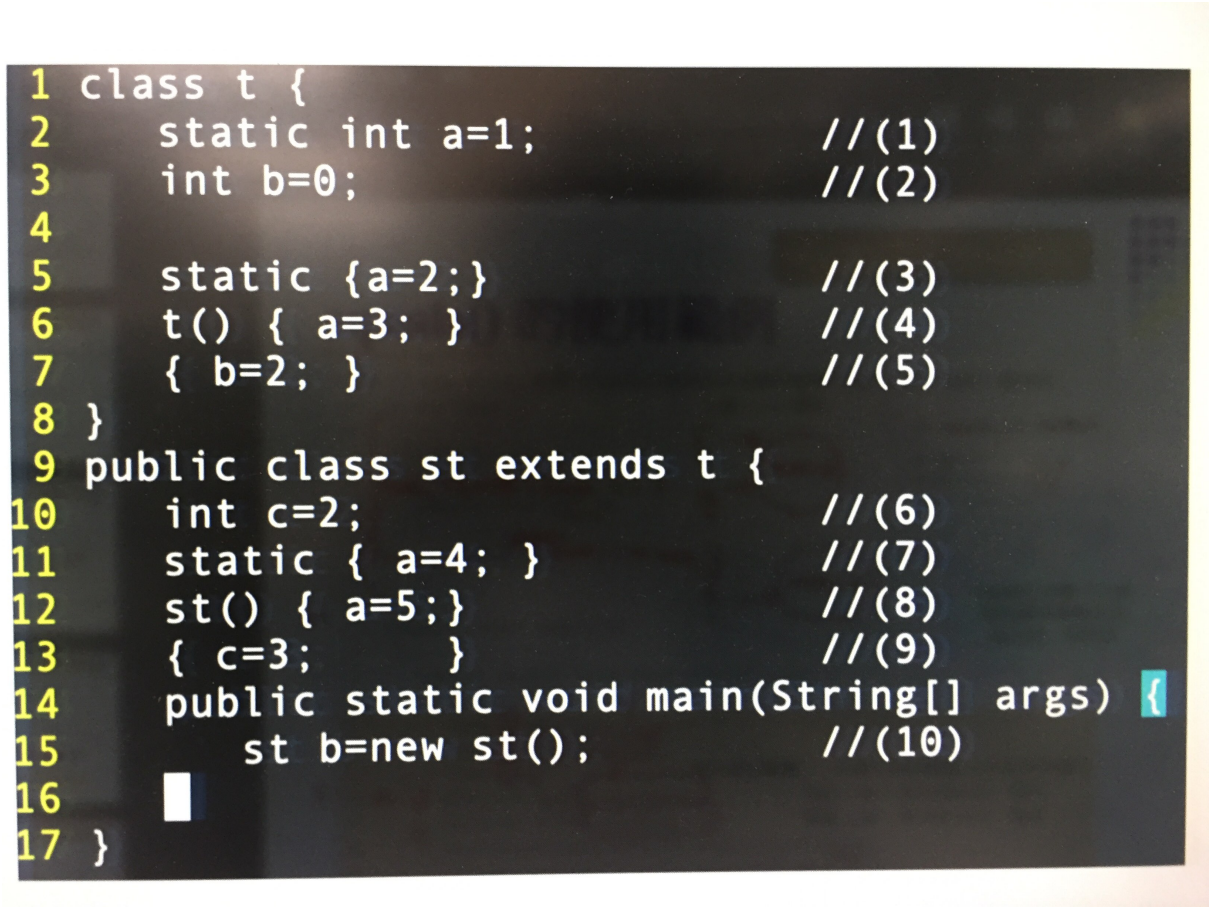
2024/01/05 當天

第一題: 順序探討



```
class t {
    static int a=1;                 //(1)
    int b=0;                        //(2)

    static {a=2;}                   //(3)
    t() { a=3; }                    //(4)
    { b=2; }                        //(5)
}
public class st extends t {
    int c=2;                        //(6)
    static { a=4; }                 //(7)
    st() { a=5;}                    //(8)
    { c=3;      }                   //(9)
    public static void main(String[] args) {
        st b=new st();              //(10)

    }
}
```

```
/* 2024/01/05 楊育哲
 * 實作第一題: 順序探討
 */
public class st extends t{
    int c=2;//6
    static { System.out.println(a);a=4; }//7
    st(){ System.out.println(a+" "+c);a=5; }//8
    { System.out.println(a+" "+c);c=3; }//9
    public static void main(String args[]){
        st b=new st();//10
    }
}
```

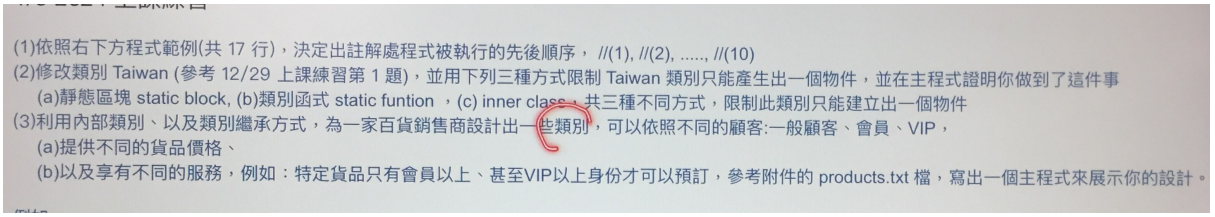
```
class t{
    static int a=1;//1
    int b=0;//2
    static { System.out.println(a);a=2; }//3
    t(){ System.out.println(a+" "+b);a=3; }//4
    { System.out.println(a+" "+b);b=2; }//5
}
// 10, 1, 3, 7, 2, 5, 4, 6, 9, 8
```

輸出:

1
2
4 0
4 2
3 2
3 3

說明: 順序10→1→3→7→2→5→4→6→9→8, 10結束

第二題:



使用A方式: (static block)

```
/* 2024/01/05 楊育哲
 * 實作第二題: 建構式設計樣式練習, 使用A方式(static block)
 */
public class h2_0105_a {
    public static void main(String args[]){
        Taiwan tw = Taiwan.getInstance();
        tw.showInfo();
        Taiwan tw2 = Taiwan.getInstance();
        System.out.println(tw.equals(tw2));
    }
```

```
}
class Country{
    String name;
    double population, groundSize, GDP;
    Country(double p, double g, double G){ population=p;groun
    public void showInfo(){ System.out.println(name+"'s popul
}
class Taiwan extends Country{
    private Taiwan(double p, double g, double G){super(p, g,
    private static Taiwan instance;
    static {
        try{
            instance = new Taiwan(23.26, 36197, 775);
        }catch(Exception e){
            throw new RuntimeException("Exception occured in
        }
    }
    public static Taiwan getInstance(){ return instance; }
    public void showInfo(){ System.out.println("Taiwan's popu
}
```

輸出:

Taiwan's population:23.26m, groundSize:36197.0km^2, GDP:775.0m
true

說明: ture表示tw equals tw2, 即兩者為同一物件，得證

使用B方式: (static function)

```
/* 2024/01/05 楊育哲
 * 實作第二題: 建構式設計樣式練習, 使用B方式(static function)
 */
public class h2_0105_b {
    public static void main(String args[]){
        Taiwan tw = Taiwan.getInstance();
        tw.showInfo();
        Taiwan tw2 = Taiwan.getInstance();
        System.out.println(tw.equals(tw2));
    }
```

```
}
class Country{
    String name;
    double population, groundSize, GDP;
    Country(double p, double g, double G){ population=p;groun
    public void showInfo(){ System.out.println(name+"'s popul
}
class Taiwan extends Country{
    private Taiwan(double p, double g, double G){super(p, g,
    private static Taiwan instance;
    public static Taiwan getInstance(){
        if(instance==null){
            instance = new Taiwan(23.26, 36197, 775);
        }
        return instance;
    }
    public void showInfo(){ System.out.println("Taiwan's popu
}
```

輸出:

Taiwan's population:23.26m, groundSize:36197.0km^2, GDP:775.0m
true

說明: 同A, ture表示tw equals tw2, 即兩者為同一物件，得證

使用C方式: (inner class)

```
/* 2024/01/05 楊育哲
 * 實作第二題: 建構式設計樣式練習, 使用C方式(inner class)
 */
public class h2_0105_c {
    public static void main(String args[]){
        Taiwan tw = Taiwan.getInstance();
        tw.showInfo();
        Taiwan tw2 = Taiwan.getInstance();
        System.out.println(tw.equals(tw2));
    }
}
class Country{
```

```
    String name;
    double population, groundSize, GDP;
    Country(double p, double g, double G){ population=p;groun
    public void showInfo(){ System.out.println(name+"'s popul
}
class Taiwan extends Country{
    private Taiwan(double p, double g, double G){super(p, g,
    private static class SingletonHelper{//return時才呼叫建立
        private static final Taiwan INSTANCE = new Taiwan(23.
    }
    public static Taiwan getInstance(){
        return SingletonHelper.INSTANCE;
    }
    public void showInfo(){ System.out.println("Taiwan's popu
}
```

輸出:

Taiwan's population:23.26m, groundSize:36197.0km^2, GDP:775.0m
true

說明: 同AB, ture表示tw equals tw2, 即兩者為同一物件，得證