Day07 (H1)

20150818

String
Array
Static Method
Making a class that has only static methods

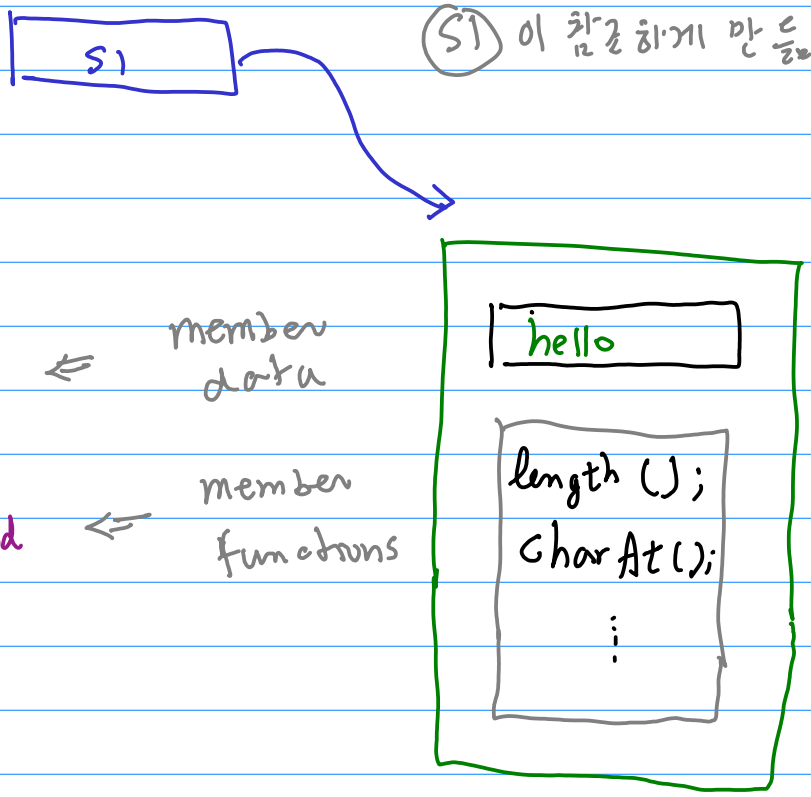
Class type | 객체 참조 변수

→ Rect | R1 ;

→ String | s1 = "hello" ;

객체를 만들고 초기화.

(S1) 이 참조하게 만들



field ⇐ member data

Method ⇐ member functions

Rect 객체 생성

```
class Rect {

    int w;
    int h;
    Rect() { w=0; h=0; }
    area() { return w*h; }
    display() { ..... }
}
```

```
class RectTest {

public static void main(String[] str) {

    Rect R1 = new Rect();

    }
}
```

Rect : class type

R1 : 객체 참조 변수

new : 객체생성자

Rect() : 생성자 함수

String 객체생성과 Rect 객체 생성 비교

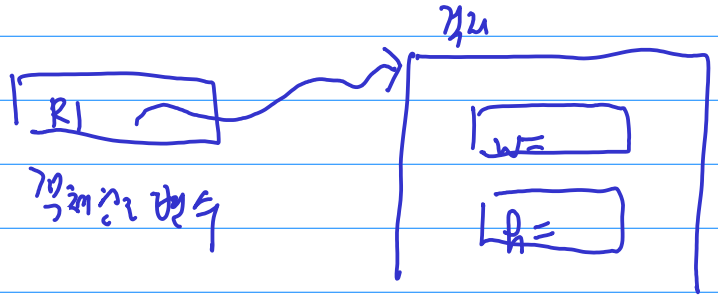
```
String st2 = new String("Hello");
Rect R1 = new Rect();
```

Rect — class type

R1 — 객체 참조 변수

new — 객체만들기

Rect() — 생성자 함수




```
String st2 = new String("Hello");
String st2 = "Hello";
```

간편한 방법

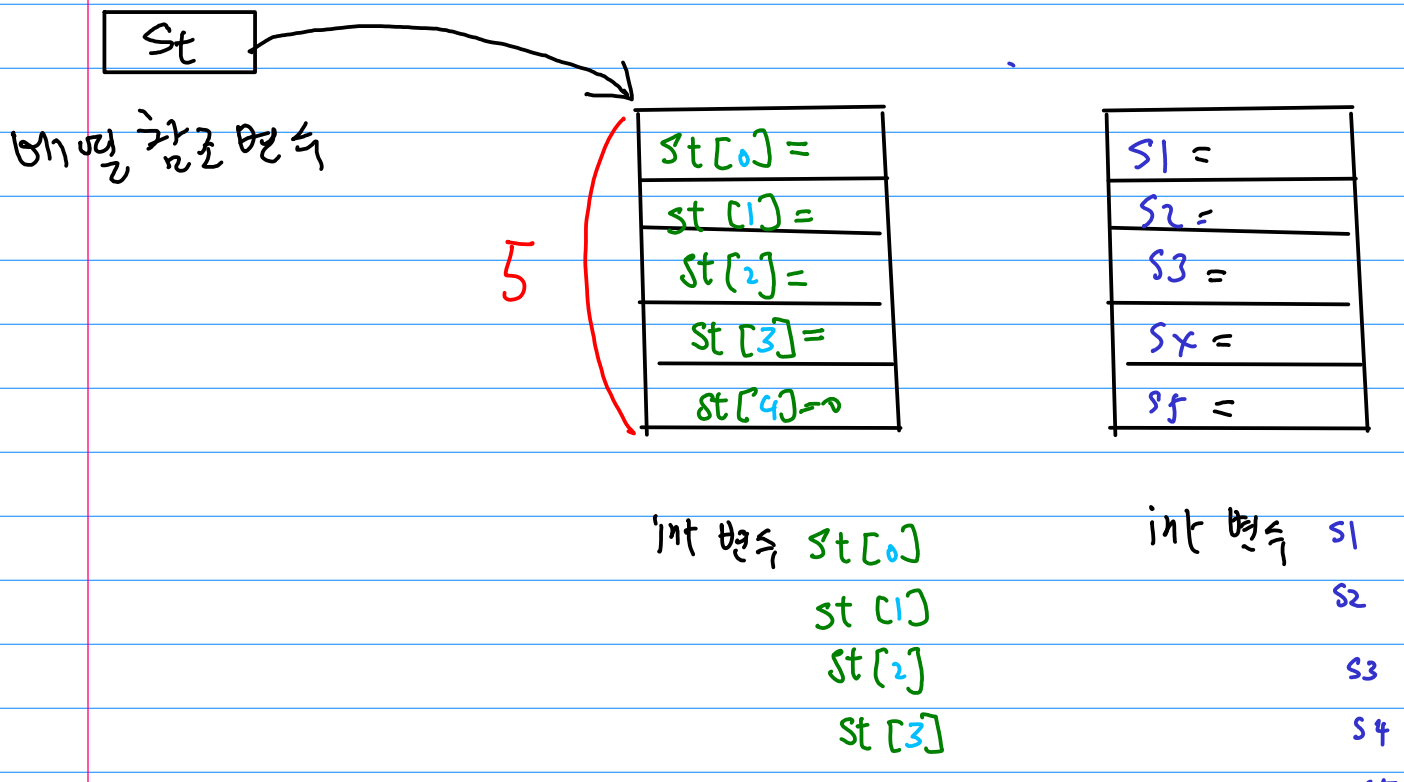
배열 (Array) 생성 방법

```
String st2 = new String("Hello");
Rect R1 = new Rect();
```

Rect : class type
R1 : 객체 참조 변수
new : 객체 만들기
Rect() : 생성자 함수

```
int[] st = new int[5];
```

int[] : int array type
st : 배열 참조 변수
new : 배열 만들기
int[5] : 5개 elements



변수에 쓰기

s1 = 100;

st[0] = 100;

변수 읽기

sum = s1 + s2 + s3 + s4 + s5;

sum = st[0] + st[1] + st[2] + st[3] + st[4];

```
sum=0
for (i=0; i<5; ++i)
    sum = sum + st[i];
```

Avg = sum / st.length;

451 / 5 = 5 × 90 + 1

정수 / 정수 → 몫: 90 ; 1: 나머지

Sum = 90;
(Sum: double)

Sum → 90.0

451.0 / 5

451 / 5.0 ⇒ 90.2

451.0 / 5.0

Sum / Avg ⇒ 몫
(int / int)

(double) Sum / Avg
(double / int)

Sum / (double) Avg
(int / double)

(double) Sum / (double) Avg
(double / double)

Finding { Maximum / Minimum

```
st[0] = 80;
st[1] = 95;
st[2] = 99;
st[3] = 92;
st[4] = 85;
```

Current max

s[0] = 80	-1 < (80)	new max = 80
s[1] = 95	80 < (95)	new max = 95
s[2] = 99	95 < (99)	new max = 99
s[3] = 92	(99) > 92	
s[4] = 85	(99) > 85	

Current min

s[0] = 80	999 > (80)	new min = 80
s[1] = 95	(80) < 95	
s[2] = 99	(80) < 99	
s[3] = 92	(80) < 92	
s[4] = 85	(80) < 85	

```
Class StringTest {

    static double calcAvg ( int[] a ) { ..... }
    static int findMax ( int[] a ) { ..... }
    static int findMin ( int[] a ) { ..... }

    static int main (String [] arg) { ..... }

}
```

make another class

```
Class Calc {

    static double calcAvg (int[] a) { ..... }
    static int    findMax (int[] a) { ..... }
    static int    findMin (int[] a) { ..... }

}
```

객체화 상관 없음

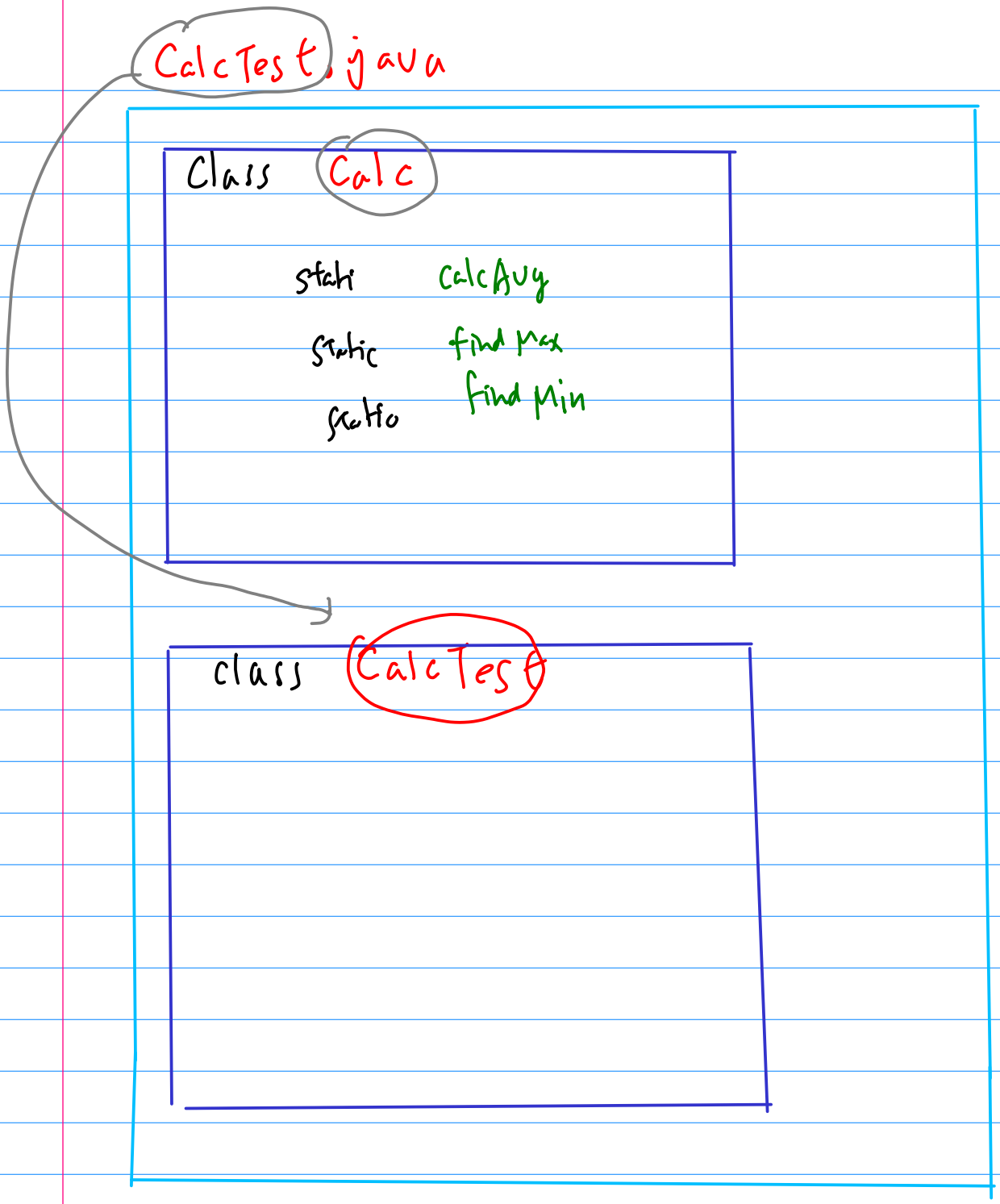
객체를 만들 필요 없음 ~~new~~

```
Class StringTest {

    static int main (String [] arg) {

        Calc. calcAvg ( )

    }
```


CalcTest.java
Class Calc
static calcAvg
static findMax
static findMin
class CalcTest