

Homework 2.

2018/662 이진영

1. Advantages : 변수를 지정할 때 타입에 구애받지 않으며,
실행도중 변수의 타입을 바꾸는 등 유연한 사용이 가능하다.
disadvantages : runtime에서 변수의 타입을 체크해주어야 해서 효율성이 떨어지며,
오류 발생 가능성이 높아진다.

2. Sub 1 : x in main.

a, y, z in sub 1.

sub 2 : x in main.

y in sub 1.

a, b, z in sub 2.

sub 3 : y, z in main.

a, x, w in sub 3.

3. Sub 1 : x=1 in main (reference: 0, assignment: 0).

a=7, y=9, z=11 in sub 1.

sub 2 : x=15 (ref: 0, assign: 0), y=3, z=5 (ref: 0, assign: x) in main.

x=15, w=17 (ref: 0, assign: 0) in sub 2.

sub 3 : y=3 (ref: 0, assign: x) in main.

a=19 (ref: 0, assign: 0), x=15, w=17 (ref: 0, assign: x) in sub 2.

b=21, z=23 (ref: 0, assign: 0) in sub 3.

4. a. d, e, f in fun3. b. d, e, f in fun3.
 c in fun2. b, c in fun1
 b in fun1. a in main.
 a in main.

c. b, c, d in fun1. d. b, c, d in fun1.
 e, f in fun3. e, f in fun3.
 a in main. a in main.

e. c, d, e in fun2. f. b, c, d in fun1.
 f in fun3. e in fun2
 b in fun1. f in fun3.
 a in main. a in main.

5. a. a, x, w in sub3. b. a, x, w in sub3.
 b, z in sub2. y, z in sub1
 y in sub1.

c. a, y, z in sub1. d. a, y, z in sub1
 x, w in sub3. x, w in sub3.
 b in sub2.

e. a, b, z in sub2. f. a, y, z in sub1.
 x, w in sub3. b in sub2.
 y in sub1. x, w in sub3.