Answer for Chapter 5 Set

October 9, 2018

1 Question 4

Implicit heap dynamic variables can only bind to a type at runtime when a value is assigned to a variable, because its type is determined during running time. Dynamic type binding is the binding of a type to a variable at runtime or changing the type of a variable during runtime. So, Implicit heap dynamic variables use dynamic type binding.

2 Question 9

sub 1: a = 7(sub1), y = 9 (sub1), z = 11(sub1), x = 1(main);

sub 2: a = 13(sub2), x =15(sub2), w = 17(sub2), y = 3(main), z = 5(main);

sub 3: a = 19(sub3), b = 21(sub3), z = 23(sub3) , x = 15(sub2),
w = 17 (sub2), y = 3(main);

3 Question 11

3.1 a

main calls fun1; fun1 calls fun2; fun2 calls fun3.

a: main
b: fun1

c: fun2
d, e, f: fun3

3.2 b

main calls fun1 ; fun1 calls fun3.

a: main
b, c: fun1
d, e, f: fun3

3.3 c

main calls fun2 ; fun2 calls fun3 ; fun3 calls fun1 .

a: main
b,c,d: fun1
e, f: fun3

3.4 d

main calls fun3; fun3 calls fun1.

a: main
b, c, d: fun1
e, f: fun3

3.5 e

main calls fun1; fun1 calls fun3; fun3 calls fun2.

a: main
b: fun1
c, d, e: fun2
f: fun3

3.6 f

main calls fun3; fun3 calls fun2; fun2 calls fun1.

a: main
b, c, d: fun1
e: fun2
f: fun3