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LAB 04

EXERCISE 1

QUESTION 1

a) A non-member function can access the private members of a class if it is declared a friend of that class.

b) void Reset(Accumulator&cAccumulator)

{cAccumulator.m\_nValue=0;}

QUESTION 2

a) A non-member class can access the private members of a class if it is declared a friend of that class

QUESTION 4

Cone()

a

getRadius()

longestRadius()

I,c[i]

main()

c1,c2

double

int

Cone

Class Cone

Text segment

Static global

Heap

Stack

QUESTION 5

(a) Memory layout:

ab a

5.5

5.5

(b) pass-by-value

(c) Line of function call:

Line 18: printCircle(ab);

Line of function defintion:

Line 13: void printCircle(Circle a) {

(d) Output:

5.5 94.985

Program 4.6

1. Memory layout:

ab &a

5.5

5.5

1. Pass-by-reference
2. Line of function call:

Line 18: printCircle(ab);

Line of function defintion:

Line 13: void printCircle(Circle a) {

1. Output:

5.5 94.985

Program 4.7

1. Memory layout:

ab &ab \*a

5.5

5.5

5.5

1. Pass-by-pointer
2. Line of function call:

Line 18: printCircle(ab);

Line of function defintion:

Line 13: void printCircle(Circle a) {

1. Output:

5.5 94.985

QUESTION 6

(a) Memory layout:

num1 n

5

5

Output: 5

(b) Modification:

Line 32: Number myBonus(2);

Line 33: operator++(&myBonus);

Line 34: return 0;

Line 35: }

Memory layout:

myBonus &myBonus

2

2

Output: 2

(c) Modification:

Line 32: Number myBonus(2);

Line 33: Number \*ptr;

Line 34: ptr = myBonus;

Line 35: operator++(\*ptr);

Line 36: return 0;

Line 37: }

Memory layout:

myBonus &myBonus \*ptr

2

2

2

Output: 2

QUESTION 7

Line 30:

num1=++num1;