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CS2050 Homework

Chapters 1.1, 1.2, 1.3, and 1.4

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Homework for Chapters 1 - 1, 2, 3, 4

1.1.1

a) 7

b) 2.0e-6 \* 100000000.1 =

2000000. \* 100000000.1 = 200000000.200000 = 200000000.2 e-6

c) true

1.1.2

a) double (1.000 + 2.236/2 = 3.236/2 = 1.618

b) double 1.0 + 2.0 + 3.0 + 4.0 = 10.0

c) boolean true

d) String 33 = 3 + “3” = “33”

1.1.4

a. if (a > b) then c = 0; incorrect, should be

if (a > b) {

c=0;

}

b. if a > b { c = 0; } incorrect, should be as in a. above

c. if (a > b) c = 0; The book says this is correct, but the programmer in me would like to see what is listed in a with the c = 0 on its own line.

d. if (a > b) c = 0 else b = 0; incorrect.

If (a > b) {

c = 0;

} else {

b = 0;

}

1.1.6

Fibonacci sequence

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, …… 233, 377, 610

1.1.7

a) 3.00009

b) 499500

c) 10000

1.1.8

a) b = X’0062’ = b

b) 197 = ‘b’ = X’0062’ and ‘c’ = X’0063’ so X’0062’ + X’0063’ = X’00C5’ = C \* 16 + 5 = 12 \* 16 + 5 = 197

c) e ‘a’ = X’0061’ + 4 would be

1 - X’0062’ = b

2 - X’0063’ = c

3 – X’0064’ = d

4 – X’0065’ = e

1.1.2

0

1

2

3

4

4

3

2

1

0

I was not able to complete:

1.3.3 - Hence, only ones that can occur are b., f., and g.

4 6 pops

3 1 pop

2 1 pop

1 1 pop

0 1 pop

9 empty stack, problem

8

7

6

5

1.4.1

for ( i = 0; 1 < N; i++){

for (j = I + 1; j< N; j++){

for (k = j+1; k < N; k++){

……

}

}

}

1.4.5  I have answers for these questions, but do not completely understand how to get to these answers.

1. N
2. ~ 1
3. ~ 1
4. ~ 2N3
5. ~ `
6. ~ 2
7. ~ N100 I also found where they stated this answer was 1 too.

1.4.6

a. T(N)

b. 2N – 1

c. N logx N

1.4.9