EE 2905

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Homework 4

1 – Provide the value of a,b,c after executing the following code snippits. 25pts

evaluate each problem individually

with a = 3, b = 1, c = 5

```
if (a != 0)
   b = 4;
else
   c = 2;
```

a != 0 → T

b → 4

a	b	c
3	4	5

with a = 3, b = 5, c = 3

```
if (c == 2)
   b = 1;
else
   a = 2;
```

c == 2 → F

a → 2

a	b	c
2	5	3

with a = 3, b = 0, c = 1

```
if (c == 0 || a && !b)
   if (!c)
      b = 1;
else
   a = 5;
```

(1 == 0) || (3 && T)

F || T → T

!T → F

a = 5

a	b	c
5	0	1

with a = 0, b = 0, c = 3

```
if (a || b || c)
   b = 1;
else
   c = 5;
```

a || b || c → T

b → 1

a	b	c
0	1	3

with a = 0, b = 0, c = 1

```
if (a)
   if (b)
      c = 2;
   else
      c = 3;
else
   c = 5;
```

a → F

c = 5

a	b	c
0	0	5

with a = 0, b = 0, c = 5

```
if (c = b){
   b++;
   c--;
}
else
   --c;
```

Note = not ==

c = 0 → False

c = -1

a	b	c
0	0	-1

2 – Provide the final values after executing the following code snippits 25pts

```
x =1;  y = 5;  z = 1;
switch(x){
   case 0:  x = 4;
            y = 3;
   case 1:  x = 3;
   default:  y = 5;
             z = 2;
}
```

x: 1 -> 3
y: 3 -> 5
z: 2

x	y	z
3	5	2

```
x =4;  y = 3;  z = 1;
switch(x){
   case 0:  x = 4;
            y = 3;
            break;
   case 1:  x = 3;
            break;
   default:  y = 5;
             z = 2;
             break;
}
```

y: 3 ->5
x: 4
z: 1 -> 2

x	y	z
4	5	2

```
x =0;  y = 3;  z = 1;
switch(x){
   case 0:  x = 4;
            y = 2;
   case 1:  x = 3;
            z = 7;
            break;
   default:  y = 5;
             z = 2;
}
```

x: 0 -> 4 -> 3
y: 3 -> 2
z: 1 -> 7

x	y	z
3	2	7

3 – Provide the values after executing the following code snippits - each snippit is evaluated independently 25pts

given:

```
int j = 0;
int k = 0;
int val=2;
```

```
while(val){
    j += 1;
    val --;
}
```

1 2

j = 2

```
while(j <= 5){
    val++;
    j++;
}
```

3 4 5 6 7 8

val = 8

```
while(val = 2){
    val++;
    j++;
}
```

= not == always true

val = ???

```
while(val + 2 < 5){
      ++val;
}
```

3

val = 3

```
j = 6;
k = 0;
while(j != k){
   val += --j * k++;
}
```

2 6 12

val = 12

4 – Provide the values after executing the following code snippits - each snippit is evaluated independently 25pts

given:

```
int val = 2;
int j;
int k;
```

		val =
`for(j = 0; j < 6; j++)` `  val = 2 * j;`	0 2 4 6 8 10	10
`for(j = 0; j < 4; j++)` `  val += 5;`	7 12 17 22	22
`for(j = 3; j >=0; j--)` `  val -= 5 – j;`	0 -3 -7 -12	-12

`for(j = 0; j < 5; j++)`
`  for(k = 0; k <5; k++)`
`  val += 1;`
	3 4 5 6 7
	8 9 …
	27
		27

`for(j = 0; j < 5; j++)`
`  for(k = 5; k > 0; k--)`
`  val += j + k;`
	7 11 14 16 17
	23 28 32 …
	127
		127