Ecen 1310 Homework 1

1.4

int *x	1004	1008
int b	1	1004
int a	2	1000

1.8

int b	3	1016
int a	~~x~~ 3	1012
int **z	1004	1008
int *y	1012	1004
int *x	1012	1000

1.11

int a	~~⊗~~ 1	1016
int b	⊗	1012
int *x	⊗	1008
int *y	⊗	1004
int **z	~~⊗~~ 1012	1000

In line 6, you are trying to set b equal to an uninitialized pointer. If address is invalid, program will crash

1.14 Stack Diagram Main 4

int sum	~~0~~ 6	1028
void *pc	Main 4+	1024
int rv	~~0~~ 6	1020
int c	3	1016
int b	2	1012
int a	1	1008
int *x	1000	1004
int a		1000

After Returning from 1st Code

int sum	~~0~~ 36	1028
int *pc	Main 5+	1024
int rv	~~0~~ 36	1020
int c	6	1016
int b	6	1012
int a	6	1008
int *x	1000	1004
int a	6	1000

After returning from sum3

int *x	1000	1004
int a	6	1000

After returning from sum3 again

int *x	1000	1004
int a	36	1000

1.21 a) 89

89	1
44	0
22	0
11	1
5	1
2	0
1	1
0	

89 = 1011001

b)

	0		
0	0	0	0·2+0
1	1	1	0·2+1
1	3	1	1·2+1
0	6	0	3·2+0
1	13	1	6·2+1
0	26	0	13·2+0
0	52	0	26·2+0
1	105	1	52·2+1

0110100 = 105

c) Odd binaries always end in 1 and evens end in 0. If it is multiple of 4, second to last will be 0, if multiple of 8, third to last will end in 0, etc.

d) i. 52

52	0
26	0
13	1
6	0
3	1
1	1
0	

52 = 110100

ii. 75

75	1
37	1
18	0
9	1
4	0
2	0
1	1
0	

75 = 1001011

iii.

	0		
0	0	0	0·2+0
1	1	1	0·2+1
1	3	1	1·2+1
0	6	0	3·2+0
1	14	1	6·2+1

01101 = 14