7. Q4

```
$ python ./x86.py -p flag.s -R ax,bx -a bx=2 -M flag,count -c -i 6
```

flag	count	ax	bx	Thread 0	Thread 1
0	0	0	2		
0	0	0	2	1000 mov flag, %ax	
0	0	0	2	1001 test $0, %ax	
0	0	0	2	1002 jne .acquire	
1	0	0	2	1003 mov $1, flag	
1	0	0	2	1004 mov count, %ax	
1	0	1	2	1005 add $1, %ax	
1	0	0	2	------ Interrupt ------	------ Interrupt ------
1	0	1	2		1000 mov flag, %ax
1	0	1	2		1001 test $0, %ax
1	0	1	2		1002 jne .acquire
1	0	1	2		1000 mov flag, %ax
1	0	1	2		1001 test $0, %ax
1	0	1	2		1002 jne .acquire
1	0	1	2	------ Interrupt ------	------ Interrupt ------
1	1	1	2	1006 mov %ax, count	
0	1	1	2	1007 mov $0, flag	
0	1	1	1	1008 sub $1, %bx	
0	1	1	1	1009 test $0, %bx	
0	1	1	1	1010 jgt .top	
0	1	0	1	1000 mov flag, %ax	
0	1	1	2	------ Interrupt ------	------ Interrupt ------
0	1	0	2		1000 mov flag, %ax
0	1	0	2		1001 test $0, %ax
0	1	0	2		1002 jne .acquire
1	1	0	2		1003 mov $1, flag
1	1	1	2		1004 mov count, %ax
1	1	2	2		1005 add $1, %ax
1	1	0	1	------ Interrupt ------	------ Interrupt ------

flag	count	ax	bx	Thread 0	Thread 1
1	1	0	1	1001 test $0, %ax	
1	1	0	1	1002 jne .acquire	
1	1	0	1	1003 mov $1, flag	
1	1	1	1	1004 mov count, %ax	
1	1	2	1	1005 add $1, %ax	
1	2	2	1	1006 mov %ax, count	
1	2	2	2	------ Interrupt ------	------ Interrupt ------
0	2	2	2		1006 mov %ax, count
0	2	2	1		1007 mov $0, flag
0	2	2	1		1008 sub $1, %bx
0	2	2	1		1009 test $0, %bx
0	2	0	1		1010 jgt .top
0	2	2	1	------ Interrupt ------	------ Interrupt ------
0	2	2	0	1007 mov $0, flag	
0	2	2	0	1008 sub $1, %bx	
0	2	2	0	1009 test $0, %bx	
0	2	2	0	1010 jgt .top	
0	2	2	0	1011 halt	
0	2	0	1	----- Halt;Switch -----	----- Halt;Switch -----
0	2	0	1		1001 test $0, %ax
0	2	0	1	------ Interrupt ------	------ Interrupt ------
0	2	0	1		1002 jne .acquire
1	2	0	1		1003 mov $1, flag
1	2	2	1		1004 mov count, %ax
1	2	3	1		1005 add $1, %ax
1	3	3	1		1006 mov %ax, count
0	3	3	1		1007 mov $0, flag
0	3	3	1	------ Interrupt ------	------ Interrupt ------
0	3	3	0		1008 sub $1, %bx
0	3	3	0		1009 test $0, %bx
0	3	3	0		1010 jgt .top
0	3	3	0		1011 halt