FURTHER HAND-TRANSLATION HINTS

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HEAPALLOC

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Example Suppose a is declared as **static int** a[]; and the data memory address of a is 5.

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ANSWER:

```
PUSHSTATADDR 5
PUSHNUM 100
HEAPALLOC
SAVETOADDR
```

BEFORE execution of: PUSHSTATADDR 5

address	Statically Allocated Data Memory
0	
1	
2	
3	
4	
a 5	

EXPRSTACK
???
⋮
???

address	HEAP (Part of Data memory)
⋮	already allocated for other purposes
13212	

address	CODE MEMORY
0	PUSHSTATADDR 5
1	PUSHNUM 100
⋮	HEAPALLOC
	SAVETOADDR
	These instructions execute:
	a = new int[100];

AFTER execution of: PUSHSTATADDR 5

address	Statically Allocated Data Memory
0	
1	
2	
3	
4	
a 5	

EXPRSTACK
???
⋮
???
PTR TO ADDR 5

address	HEAP (Part of Data memory)
⋮	already allocated for other purposes
13212	

address	CODE MEMORY
0	
1	
⋮	
	PUSHSTATADDR 5
	PUSHNUM 100
	HEAPALLOC
	SAVETOADDR
	These instructions execute:
	a = new int[100];

AFTER execution of: PUSHNUM 100

address	Statically Allocated Data Memory
0	
1	
2	
3	
4	
a 5	

EXPRSTACK
???
⋮
???
PTR TO ADDR 5
100

address	HEAP (Part of Data memory)
⋮	already allocated for other purposes
13212	

address	CODE MEMORY
0	
1	
⋮	
	PUSHSTATADDR 5
	PUSHNUM 100
	HEAPALLOC
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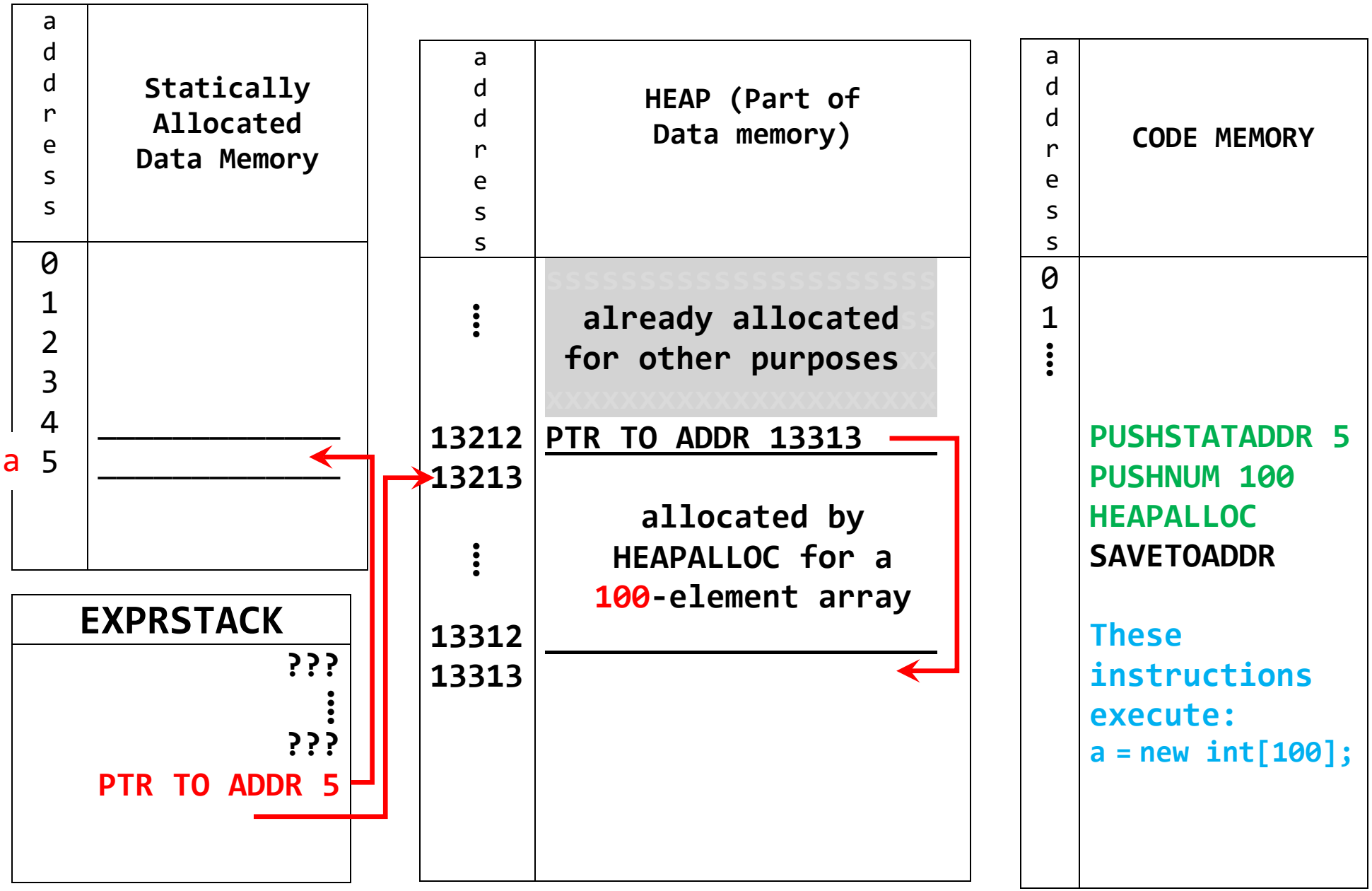
	These instructions execute:
	a = new int[100];

AFTER execution of: HEAPALLOC



AFTER execution of: SAVETOADDR