CS2123 Data Structures

Suppose we have the following declarations and dynamic memory allocation statements. (We assume that all memory allocations are successful so after each malloc() we are not checking if the returned address is NULL or not).

```
typedef struct {
    int x;
    int y;
} myDataT;


myDataT   a, *b, **c;

b = (myDataT *) malloc( 2 * sizeof(myDataT));

c = (myDataT **) malloc( 3 * sizeof(myDataT *));

for(int i=0; i < 3; i++)
  c[i] = (myDataT *) malloc( (i+1) * sizeof(myDataT));
```
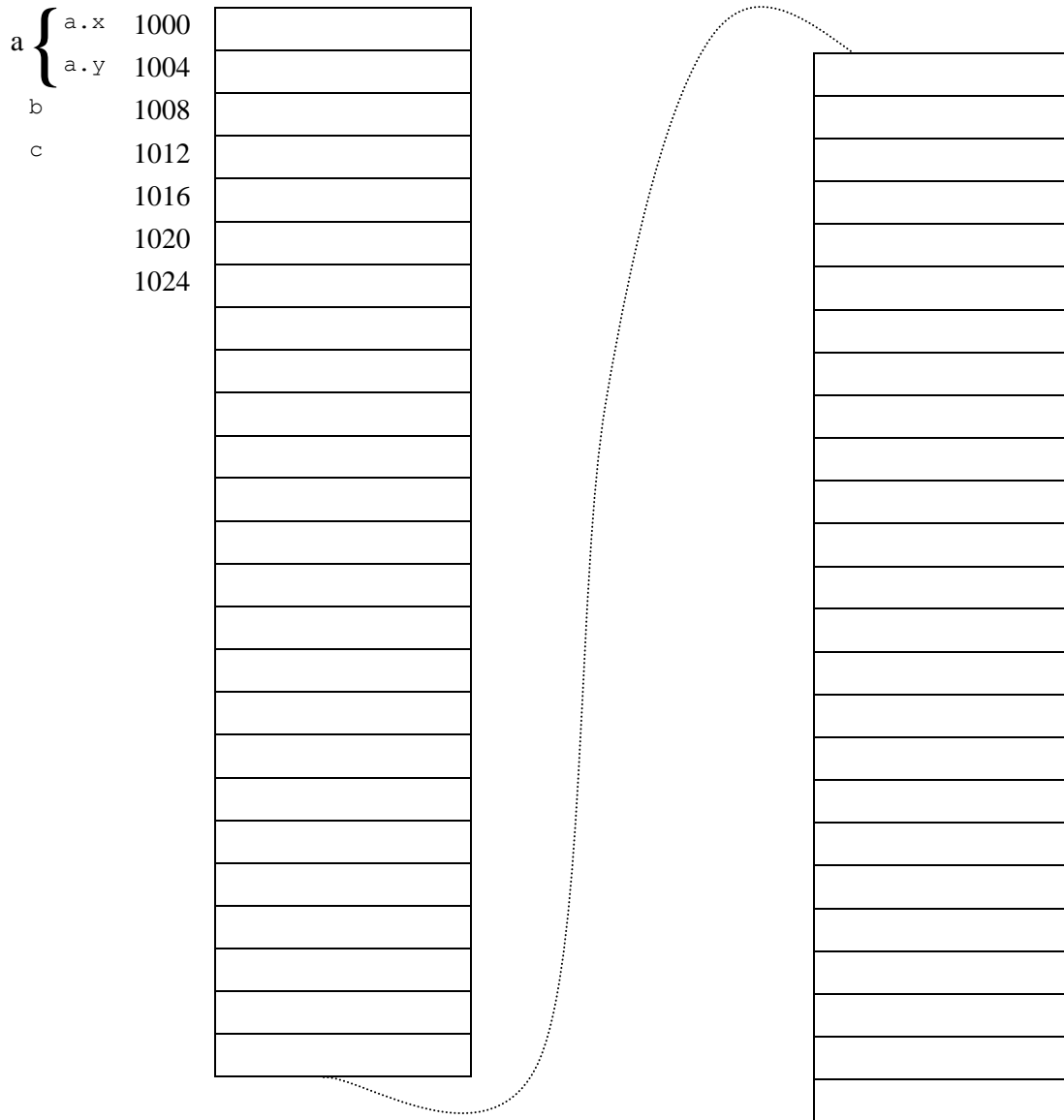
a. (6pt) You are asked to conceptually draw how memory is allocated and which pointers point to which arrays or structures/records according to the above code.

a {	a.x	1000
	a.y	1004
	b	1008
	c	1012
		1016
		1020
		1024

b. (4pt) Write the necessary statements to release (free) all the memory allocated by the above code.