

RAM

Var. Name	Address	Content	
	7042		·
	7041		·
	7040		·
	7039		·
	7038		·
	7037		10
	7036		9
	7035		8
	7033		7
	7032		6
	7031	\0'	5
	7030	d	4
	7029	i	3
	7028	v	2
	7027	a	1
	7026	D	0
storage	7025	7026	
	7024		
	7023		
next2fill	7022	5	

```
char src[] = "David";

char storage[20];
int next2fill = 0;
while (src[next2fill]) {
    storage[next2fill++] =
        src[next2fill]; }

storage[next2fill] = '\0';
```

After the above code runs, memory in a “Holder” class object looks as shown to the left. “storage” is a 20-byte array (yellow), with the **name** “storage” associated with a memory location that holds a **const pointer** to the base of the array.

RAM

Var. Name	Address	Content	
freestore	14734		
	14733	\0	5
	14732	d	4
	14731	i	3
	14730	v	2
	14729	a	1
	14728	D	0
	14727		
	14726		
	7031		
	7030		
storageSize	7029	6	
next2get	7027	0	
stg	7025	14728	
next2fill	7023	5	
	7022		

```
char src[] = "David";
int L = strlen(src) + 1;
char * stg = new char[L];
int next2fill = 0;
while (src[next2fill]) {
    stg[next2fill++] =
        src[next2fill]; }
stg[next2fill] = '\0';
```

After the above code runs, memory in a “Fifo” class object looks as shown to the left. There’s a 6-byte array (green) off in the freestore, and member variable “stg” holds a **dynamic** pointer to the base of the array.