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* How many Counter objects were created?

Answer: There are 2 Counter objects

* What is the relationship between the variables and the objects?

Answer: Variables declared in main would be on stack which is having memory address for objects created on the heap.

* + Example: myCounters[0] is having memory address for the object with the name “Counter 1”.
* Why does resetting myCounter[2] change the value of the counter in myCounters[0]?

Answer: myCounters[2] and myCounters[0] are pointing to the same object memory, so any changes to the pointed object would be reflected at both variables.

* Where are objects allocated? The stack or the heap?

Answer: Objects are allocated on the heap

* How does a class’ new method affect memory? What does it do and what does it return?

Answer: When new is called in a class it (creates the object of that class) then it returns (memory address of the new initialize object)

* Draw a diagram showing the locations of the variables and objects in main:

|  |  |
| --- | --- |
| Stack | Heap |
| |  | | --- | | Main | | myCounters | | |  |  |  | | --- | --- | --- | | counters | | | | myCounters[0] | myCounters[1] | myCounters[2] |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | Counter 1 |  | Counter 2 | | name  value = count | name  value = count | | |