Answers to Questions from P1.2

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How many Counter objects were created?

A total of 2

Variables declared in main() are different to the objects created when we call new. What is the relationship between the declared variables in main and the objects created?

Variables reference objects.

Resetting the counter in myCounters[2] also changes the value of the counter in myCounters[0]. Why does this happen?

myCounter[2] and myCounter[0] reference the same object.

The key difference between memory on the heap compared to the stack and the heap is that the heap holds dynamically allocated memory. What does this mean ?

Dynamic memory allocation means memory is allocated at runtime and therefore can be much more flexible whereas memory on the stack needs to be known at compile time.

On which are objects allocated (heap or stack) ? On which are local variables allocated (heap or stack) ?

Objects are allocated on the heap.
Local variables are allocated on the stack.

What does the new() method do when called for a particular class What does it do and what does it return?

When new is called on a class it *allocates enough memory for the object* then it returns *an instance of that object's class. The instance would be initialised by the classes constructor.*

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