Java has below memories :

1. Heap
2. Stack
3. Meta

Stack : When we create a method, local variables, reference of objects then these all are stored in stack. It operated in LIFO manner.

Heap : Objects are stored in Heap and reference stored in stack. The reference points to Object kept in Heap.

Meta : Static variables stored in meta space.

Heap is further divided into :

1. Young generation (is further divided into 3 parts : )
   1. EDEN Space
   2. Survivor space 1
   3. Survivor space 2

When object is created inside heap, it is actually in Eden space and its references are in Stack memory. Garbage collector always happens in Heap (eden) memory, objects with no references or null or blank references are destroyed by garbage collector. When garbage collector called by JVM automatically, all valid objects moved to Survivor1 or Survivor2.

1. Meta space : It stores only static method, blocks, variables and methods.

Stack Heap

Storage : methods, local variables, reference variables Objects

Order : LIFO Complex mechanism

Life : current method (deallocation happens after method

execution completes) Throughout the program execution / application

Efficiency : Faster than Heap Slower than Stack

Allocation deallocation : Automatically(when method is called) For newly created object. Deallocation : when garbage collector invoked