

使用serialGC

```
java -XX:+PrintGCDetails -XX:+PrintGCDateStamps -Xmx512m -Xms512m -XX:+UseSerialGC week_01_jvm.jmm.0
正在执行...
2021-03-25T15:32:39.522-0800: [GC (Allocation Failure) 2021-03-25T15:32:39.522-0800: [DefNew: 139776K->17471K(157248K), 0.0306595 secs] // defNew 串行化新生代gc
2021-03-25T15:32:39.580-0800: [GC (Allocation Failure) 2021-03-25T15:32:39.580-0800: [DefNew: 156924K->48449K(506816K), 0.0307162 secs] // 整个堆的变化
2021-03-25T15:32:39.634-0800: [GC (Allocation Failure) 2021-03-25T15:32:39.634-0800: [DefNew: 157084K->364168K(506816K), [Metaspace: 2566K->2566K(1056768K)], 0.0487291 secs]
2021-03-25T15:32:39.682-0800: [GC (Allocation Failure) 2021-03-25T15:32:39.682-0800: [DefNew: 157245K->364168K(506816K), [Metaspace: 2566K->2566K(1056768K)], 0.0487291 secs]
2021-03-25T15:32:39.739-0800: [GC (Allocation Failure) 2021-03-25T15:32:39.739-0800: [DefNew: 157248K->364168K(506816K), [Metaspace: 2566K->2566K(1056768K)], 0.0487291 secs]
2021-03-25T15:32:39.793-0800: [GC (Allocation Failure) 2021-03-25T15:32:39.793-0800: [DefNew: 157034K->364168K(506816K), [Metaspace: 2566K->2566K(1056768K)], 0.0487291 secs]
2021-03-25T15:32:39.844-0800: [GC (Allocation Failure) 2021-03-25T15:32:39.844-0800: [DefNew: 157247K->364168K(506816K), [Metaspace: 2566K->2566K(1056768K)], 0.0487291 secs]
2021-03-25T15:32:39.895-0800: [GC (Allocation Failure) 2021-03-25T15:32:39.895-0800: [DefNew: 157247K->364168K(506816K), [Metaspace: 2566K->2566K(1056768K)], 0.0487291 secs]
2021-03-25T15:32:39.943-0800: [GC (Allocation Failure) 2021-03-25T15:32:39.943-0800: [DefNew: 157247K->364168K(506816K), [Metaspace: 2566K->2566K(1056768K)], 0.0487291 secs]
2021-03-25T15:32:40.017-0800: [GC (Allocation Failure) 2021-03-25T15:32:40.017-0800: [DefNew: 139776K->17471K(157248K), 0.0306595 secs] // defNew 串行化新生代gc
2021-03-25T15:32:40.045-0800: [GC (Allocation Failure) 2021-03-25T15:32:40.045-0800: [DefNew: 157247K->48449K(506816K), 0.0307162 secs] // 整个堆的变化
2021-03-25T15:32:40.082-0800: [GC (Allocation Failure) 2021-03-25T15:32:40.082-0800: [DefNew: 157246K->364168K(506816K), [Metaspace: 2566K->2566K(1056768K)], 0.0487291 secs]
2021-03-25T15:32:40.145-0800: [GC (Allocation Failure) 2021-03-25T15:32:40.145-0800: [DefNew: 139776K->17471K(157248K), 0.0306595 secs] // defNew 串行化新生代gc
2021-03-25T15:32:40.176-0800: [GC (Allocation Failure) 2021-03-25T15:32:40.176-0800: [DefNew: 157248K->48449K(506816K), 0.0307162 secs] // 整个堆的变化
2021-03-25T15:32:40.240-0800: [GC (Allocation Failure) 2021-03-25T15:32:40.240-0800: [DefNew: 139614K->364168K(506816K), [Metaspace: 2566K->2566K(1056768K)], 0.0487291 secs]
2021-03-25T15:32:40.307-0800: [GC (Allocation Failure) 2021-03-25T15:32:40.307-0800: [DefNew: 139776K->17471K(157248K), 0.0306595 secs] // defNew 串行化新生代gc
2021-03-25T15:32:40.362-0800: [GC (Allocation Failure) 2021-03-25T15:32:40.362-0800: [DefNew: 139776K->48449K(506816K), 0.0307162 secs] // 整个堆的变化
2021-03-25T15:32:40.426-0800: [Full GC (Allocation Failure) 2021-03-25T15:32:40.426-0800: [Tenured: 349546K->349099K(349568K), 0.0486849 secs] // 老年代 串行化gc 标识
执行结束! 共生成对象次数: 9503
Heap
 def new generation total 157248K, used 20739K [0x00000007a0000000, 0x00000007aaaa0000, 0x00000007a0000000)
  eden space 139776K, 14% used [0x00000007a0000000, 0x00000007a1440e88, 0x00000007a8880000)
  from space 17472K, 0% used [0x00000007a9990000, 0x00000007a9990000, 0x00000007aaaa0000)
  to space 17472K, 0% used [0x00000007a8880000, 0x00000007a8880000, 0x00000007a9990000)
 tenured generation total 349568K, used 349099K [0x00000007aaaa0000, 0x00000007c0000000, 0x00000007c0000000)
  the space 349568K, 99% used [0x00000007aaaa0000, 0x00000007bfff8ac58, 0x00000007bfff8ae00, 0x00000007bfff8ae00)
 Metaspace used 2572K, capacity 4486K, committed 4864K, reserved 1056768K
 class space used 277K, capacity 386K, committed 512K, reserved 1048576K
```

```
1 2021-03-25T15:32:39.522-0800:
2 [GC (Allocation Failure) // GC 代表新生代
3 2021-03-25T15:32:39.522-0800:
4 [DefNew: 139776K->17471K(157248K), 0.0306595 secs] // defNew 串行化新生代gc
5 139776K->48449K(506816K), 0.0307162 secs] // 整个堆的变化
6 [Times: user=0.01 sys=0.01, real=0.03 secs]
```

```
1 2021-03-25T15:32:40.426-0800:
2 [Full GC (Allocation Failure) // full gc
3 2021-03-25T15:32:40.426-0800:
4 [Tenured: 349546K->349099K(349568K), 0.0486849 secs] // 老年代 串行化gc 标识
5 506750K->364168K(506816K), [Metaspace: 2566K->2566K(1056768K)], 0.0487291 secs]
6 [Times: user=0.04 sys=0.00, real=0.05 secs]
```