JMH GENERATION OPTIONS

1. **-t**: Specifies the number of threads to use during benchmark execution. For example, -t 4 would use four threads for running benchmarks.

2. **-tg**: Specifies the thread group size. This parameter is used to control how threads are distributed across the benchmarks. For example, -tg 2x4 would create two thread groups, each containing four threads.

3. **-tgf**: Specifies the thread group format. This parameter defines how thread groups are created and named. For example, -tgf mygroup-%d would create thread groups named mygroup-0, mygroup-1, etc.

4. **-to**: Specifies the timeout for each benchmark iteration. If a benchmark iteration exceeds this timeout, it will be aborted. For example, -to 10s sets the timeout to 10 seconds.

5. **-w**: Specifies the warm-up time for each benchmark iteration. This parameter allows you to control the duration of warm-up iterations independently of the number of warm-up iterations. For example, -w 2s sets the warm-up time to 2 seconds.

6. **-wi**: This option sets the number of warm-up iterations. Warm-up iterations are used to allow the JVM to warm up and optimize the code before actual benchmarking starts.

7. **-r**: This option sets the number of measurement iterations. Measurement iterations are the actual runs of the benchmarked code used to collect performance data.

8. **-i**: This option sets the number of iterations. This specifies the number of times the benchmark will be executed within each measurement iteration.

9. **-rf**: Specifies the output file format for benchmark results. For example, -rf csv would output results in CSV format.

10. **-p**: This option is typically followed by parameters to be passed to the benchmark method. For example, -p size=100 could be used to parameterize the benchmark method with different input sizes.

11. **-f**: This option sets the number of forks. Forks represent the number of times the benchmark will be executed in a separate JVM process. A value of 1 means no forking; the benchmark will be run in the same JVM process.

12. **-bm**: This option specifies the benchmark mode (-bm). For example, -bm ss would set to "single shot" mode (ss). In single shot mode, each benchmark iteration is measured only once. This can be useful for microbenchmarks where you want to measure the performance of individual operations.