1. Diagram

2. GITHUB: https://github.com/likcu/DistributedSystem
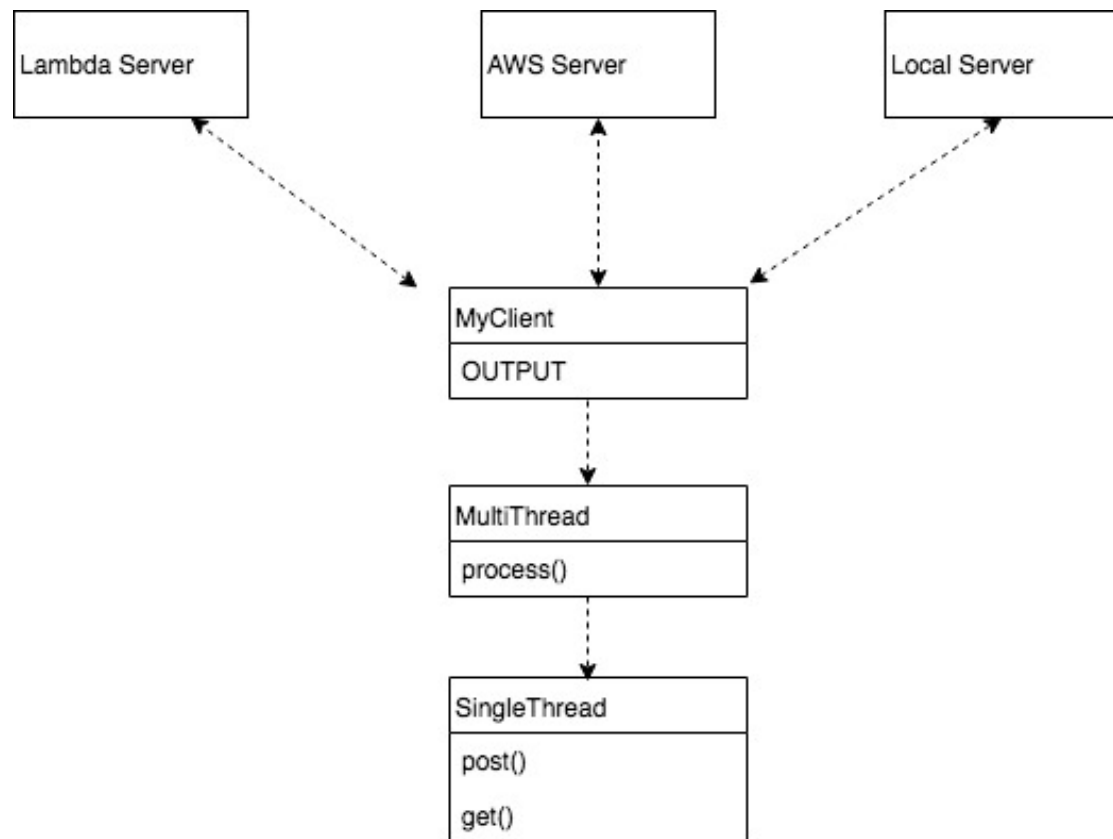
3.

EC2 Server:

[20 threads, 100 iteration]

```
Client Starting ..... Time: 19:04:42
Warmup phase:All threads running...
Warmup phase:complete:Time 9395
Loading phase:All threads running...
Loading phase:complete:Time 8890
Peak phase:All threads running...
Peak phase:complete:Time 9846
Cooldown phase:All threads running...
Cooldown phase:complete:Time 8664
=====================================
Total number of requests sent:7400
Total number of Successful responses:7400
Test Wall Time:36795
Overall throughput across all phases:0.20111428183177063
Mean latencies for all requests:45
Median latencies for all requests:36
99th percentile latency:162
99th percentile latency:77
```

[100 threads, 100 iteration]

```
Client Starting ..... Time: 17:42:27
Warmup phase:All threads running...
Warmup phase:complete:Time 20296
Loading phase:All threads running...
Loading phase:complete:Time 19963
Peak phase:All threads running...
Peak phase:complete:Time 21440
Cooldown phase:All threads running...
Cooldown phase:complete:Time 20095
=====================================
Total number of requests sent:37000
Total number of Successful responses:37000
Test Wall Time:81794
Overall throughput across all phases:0.45235591852703133
Mean latencies for all requests:101
Median latencies for all requests:153
99th percentile latency:442
99th percentile latency:129

Process finished with exit code 0
```

4. Lambda Server:

    [20 threads, 100 iteration]

```
Client Starting ..... Time: 21:56:08
Warmup phase:All threads running...
Warmup phase:complete:Time 25596
Loading phase:All threads running...
Loading phase:complete:Time 23068
Peak phase:All threads running...
Peak phase:complete:Time 22828
Cooldown phase:All threads running...
Cooldown phase:complete:Time 23274
======================================
Total number of requests sent:7400
Total number of Successful responses:7400
Test Wall Time:94766
Overall throughput across all phases:0.07808707764388072
Mean latencies for all requests:114
Median latencies for all requests:116
99th percentile latency:184
99th percentile latency:133
```

    [100 threads, 100 iteration]

```
Client Starting ..... Time: 20:00:07
Warmup phase:All threads running...
Warmup phase:complete:Time 27625
Loading phase:All threads running...
Loading phase:complete:Time 29319
Peak phase:All threads running...
Peak phase:complete:Time 27143
Cooldown phase:All threads running...
Cooldown phase:complete:Time 23465
======================================
Total number of requests sent:37000
Total number of Successful responses:37000
Test Wall Time:107552
Overall throughput across all phases:0.3440196370127938
Mean latencies for all requests:127
Median latencies for all requests:113
99th percentile latency:332
99th percentile latency:183
```