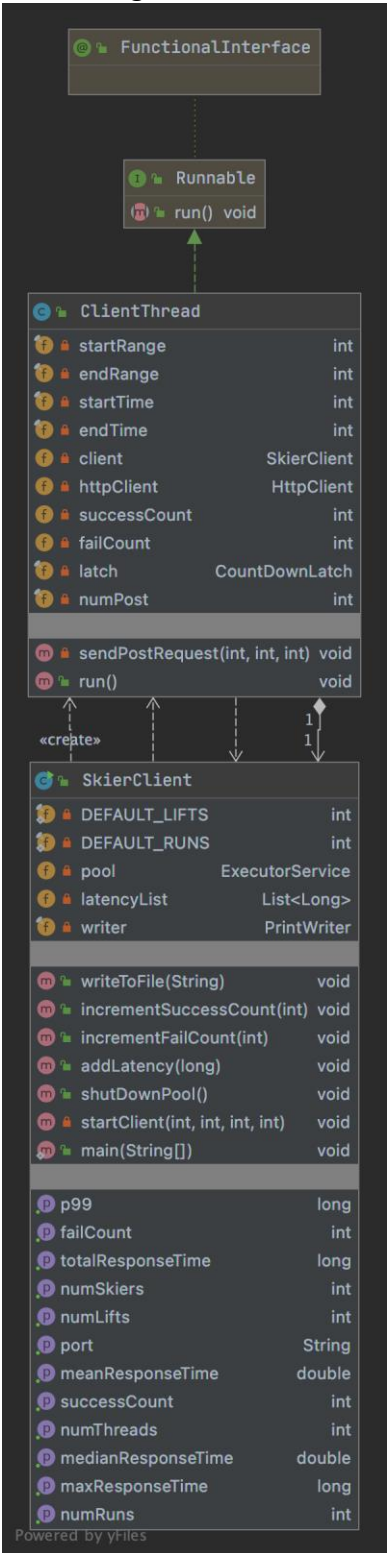


Skier Client Design Doc

1. Class Design



There're two main class in the Skier Client Design: **SkierClient** and **ClientThread**. **SkierClient** is used for taking the input arguments, arguments verification and generating

multiple threads for each phase. With SkierClient, it has a thread pool to control all the threads, a writer for recording the back request and a cache to store the response time. In each phase, the SkierClient will generate multiple ClientThread according to the input arguments. Within each ClientThread, it has a HttpClient to send multiple POST request to the server, when a thread finished running, it will call the countdown method of the latch given by the SkierClient, in order to control the start of next phase.

2. Little's Law prediction

Each request will take around 170 - 180 ms. According to little's law, the throughput for 32 threads will be around 177 – 188, the throughput for 64 threads will be around 355 - 376, the throughput for 128 threads will be around 710 - 752, the throughput for 256 threads will be around 1422 – 1505. All the results fall into their corresponding ranges, which means the program is good.