CSE 124 Project 4

Experiment 1: N Independent Requests

For the following number of requests, the average response time is as follows:

|  |  |
| --- | --- |
| Number of Requests | Average Response Time (ms) |
| 10 | 89 |
| 20 | 88 |
| 30 | 88 |

Experiment 2: P Parallel Requests, all must Complete

|  |  |
| --- | --- |
| Number of Parallel Requests | Total Response Time (ms) |
| 10 | 133 |
| 20 | 284 |
| 30 | 327 |

Experiment 3: P Parallel Requests, 90% must Complete

|  |  |
| --- | --- |
| Number of Parallel Requests | Response Time of 90% of Requests (ms) |
| 10 | 112 |
| 20 | 132 |
| 30 | 130 |

Response Question

By shedding the slowest 10% of the requests, the effect of the speedup becomes quite significant as the number of requests increases. This is because when the number of parallel requests increases, the variance of the response time becomes greater with a small number of requests taking a very long time. By ignoring the slowest 10% of responses, we can maintain the maximum request time at a reasonable amount.