|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Lambda 0.5 |  | Lambda 2.0 |  |
|  | Mean | Standard Deviation | Mean | Standard Deviation |
| FCFS (Work)  First Floor Policy | 124.841 | 60.58 | 225.759 | 83.718 |
| FCFS (Leaving)  First Floor Policy | 145.771 | 61.128 | 238.618 | 90.836 |
| Linear Scan (Work)  First Floor Policy | 100.645 | 45.913 | 116.9 | 42.585 |
| Linear Scan (Leaving)  First Floor Policy | 110.128 | 45.799 | 114.78 | 45.362 |
| FCFS (Work)  Idling Policy | 120.737 | 58.982 | 226.073 | 83.034 |
| FCFS (Leaving)  Idling Policy | 134.011 | 62.722 | 238.392 | 92.27 |
| Linear Scan (Work)  Idling Policy | 101.012 | 46.328 | 116.747 | 41.824 |
| Linear Scan  (Leaving)  Idling Policy | 103.532 | 45.419 | 114.462 | 45.538 |

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Analysis

With this data, linear scan was able to be interrupted by other people, while first come first serve (FCFS), was not.

When lambda = 2.0, or 4 people per minute, the idling policies make virtually no difference in wait times. This shouldn’t be surprising, as it wouldn’t have many opportunities to get to the first floor before a request for the elevator was made.

The first-floor policy when using FCFS is slower due to it having to go to the first floor to “idle” before it can take any more requests. With linear scan, however, that isn’t a problem, as if the elevator gets a request on it’s way to idling, it can service that person instead.

With both Linear Scan and FCFS, the leave times are better when there is an idling policy, this would make sense because the elevator would theoretically be closer to the floors that people work on.