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CIS - 3207 Sec 003

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RUNS.txt

**Constants:**

SEED (changed per run)

INIT\_TIME 0

FIN\_TIME 200000

ARRIVE\_MIN 0

ARRIVE\_MAX 100

QUIT\_PROB 80

CPU\_MIN 1

CPU\_MAX 20

DISK1\_MIN 1

DISK1\_MAX 20

DISK2\_MIN 1

DISK2\_MAX 20

**RUNS:**

**Run 1.1:**

MAXJOBS = 500

SEED = 1

With these settings the simulator runs 385 jobs in 4187 units of time

UTILIZATION OF EACH COMPONENT:

CPU: 0.806544

DISK1: 0.159064

DISK2: 0.0343922

**Run 1.2:**

MAXJOBS = 500

SEED = 12

With these settings the simulator runs 262 jobs in 2821 units of time

UTILIZATION OF EACH COMPONENT:

CPU: 0.850408

DISK1: 0.143566

DISK2: 0.00602623

**Run 1.3:**

MAXJOBS = 500

SEED = 123

With these settings the simulator runs 395 jobs in 4183 units of time

UTILIZATION OF EACH COMPONENT:

CPU: 0.845326

DISK1: 0.103992

DISK2: 0.0506813

**Run 1.4:**

MAXJOBS = 500

SEED = 77

With these settings the simulator runs 232 jobs in 2461 units of time

UTILIZATION OF EACH COMPONENT:

CPU: 0.836245

DISK1: 0.124746

DISK2: 0.0390085

**Run 1.5:**

MAXJOBS = 500

SEED = 777

With these settings the simulator runs 301 jobs in 3385 units of time

UTILIZATION OF EACH COMPONENT:

CPU: 0.799114

DISK1: 0.165731

DISK2: 0.0351551

**Determining Values and percentages:**

The values for the component intervals as well as the chance that jobs either need further service at the disk or will stay in the component were determined by testing several values and looking at the results to see which one yielded the cleanest results that I thought would fit the best into the simulator.

**Findings:**

Looking at the values for Utilization from each of the runs we see that they don’t vary by much. One interesting thing that arose when you compare Run 1.3 to Run 1.1. Run 1.3 handles ten more jobs in three units of time faster. This is due to the slight variance in the job\_time but I thought it was an interesting occurrence.

**What I learned:**

The most interesting thing I learned through creation and testing of this simulator was it helped me visualize how my computer was running, almost in real time. I know the scheduler doesn’t work exactly how the simulator defines it, but it’s close enough to get a general understanding of what is happening inside my computer each time I want to play a game or watch a video online.