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Lab 1: Georgio’s Discrete Event Simulator.

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In this project I have created Georgio’s Discrete Event Simulator, that simulates the whole operation of a computer virtually. In my simulator I have 1 CPU and 2 disks.

**How it works:**

At the start of the program 3 initial jobs are created and loaded into the priority queue and then 1 job is removed from the queue and sent to the CPU for processing. In the CPU the job is given a processing time randomly and the CPU waits until it’s time to release the job and move on to the next job. After a job is completed by the CPU, it is then sent to a function to check it’s probability, whether it will leave the simulation or not. If it leaves it’s given an event tag as 6 and loaded back into the priority queue. If it moves on to the disk then event tag 4 is given and sent to the priority queue.

Next the priority queue is popped and if the job’s event type is a 4 it’s send to a function which sends the job to the lowest queued disk. As same as the CPU, in the disk the job is given a wait time randomly and waits for it’s turn to get released. After the job is released from the job, it is sent back to the queue.

**How to compile:**

To use the code, please use the “make” command to compile the code, this should create the “Simulation” file. Run the Simulation file in terminal. This should create two more files, One is stats.txt and the other one is log.txt