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SYSC3303
Project Iteration 4
L2G2 Teamwork Breakdown

For iteration 4, we introduced faults to the elevator system while also adding some optimizations to our system; primarily allowing the scheduler to send multiple requests in one packet, and allowing the elevator to correctly decode these and address them all in one pass. We felt that it was necessary to break the code into four parts: the scheduler, elevator, and floor subsystem, and the simulation that reads and sends file inputs. After discussing our plans for how we are going to communicate between the different programs. Thus, the code and tests were split into the following roles:

- The scheduler and elevator optimizations (i.e. addressing multiple requests) were done by Jacob and Farhan primarily with help from others
- The fault handling and introduction was done by Subear and Will primarily
- A small GUI for sending faults was introduced by Will
- Test fixes and updates as well as code clean up to address the changes introduced in this iteration was done by the entire team

Like previous iterations, our approach to coding was to take ownership of our designated classes, but to also communicate how we would send the packets with each other. Based on the roles given in iteration 1, we believed it was best to designate jobs to people with prior experience of the programs. We had several in-person and discord meetings to discuss our updates and code together to ensure our socket communication was done correctly. While we had ownership of the specified classes, over the course of the iteration we all collaborated and added code to various different parts of the system. Now we have a designated helper thread to assist with the main running components of our project. This was to ensure that the scheduler was not overloaded with work and was solely used for augmenting and storing data. We also implemented faults and fault handling. This was done by Will as he thought it would be best to allow the user (admin in this case) to choose when the faults would occur. We split the rest of the requirements into:

- Scheduler class diagrams, set up instructions, and README were done by Will
- Team breakdown and timing diagram was done by Farhan.
- Elevator and Common class diagrams was done by Subear

- Scheduler and Elevator sequence diagrams and work breakdown was done by Jacob.

With the external requirements, our approach was to complete the portion that we had taken ownership of, and then get the rest of the team to review it. Everyone went over every section, and if there were any issues or anything the creator needed to include, we shared suggestions and worked to finalize all of the documents in a way that we were all satisfied with.