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Documentation

RTX P1

Memory

- Heap init does a linked list of memory blocks.
- Request memory gets the front of the linked list. If the front is NULL, it will block the current process and release the processor.
- Release Memory will put the memory block at the front of the stack. It will then unblock all processes and perhaps release the processor if there is a lower or equal unblocked process.

Process

- Priority Queue with states: NEW, RDY, BLOCKED, and RUN.
- Set priority will remove it from its current linked list and put it at the end of another, if there is now a lower priority process to run the processor will be released.
- Get priority will return the priority of the ID passed in, if the ID is invalid it will return RTX_ERR.
- Release processor will get the front of the lowest priority linked list that exists that is not blocked.

Test Processes

- Test 1 will test the request memory function, release memory function, blocking processes when out of memory, unblocking processes when releasing memory.
- Test 2 will test changing a process to a higher priority process so that equal priority processes no longer get run.
- Test 3 will test changing another process to a priority that is higher than the current process so that the current process will never get run again.
- Test 4 will test a high priority process getting blocked because there is no more memory and a lower priority process being run because of this.