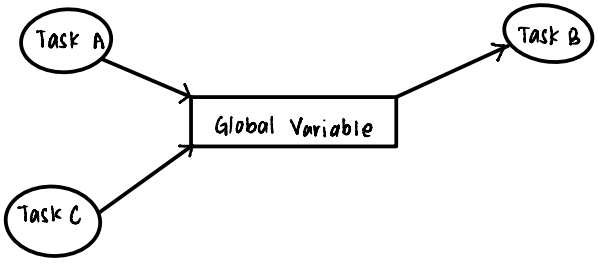
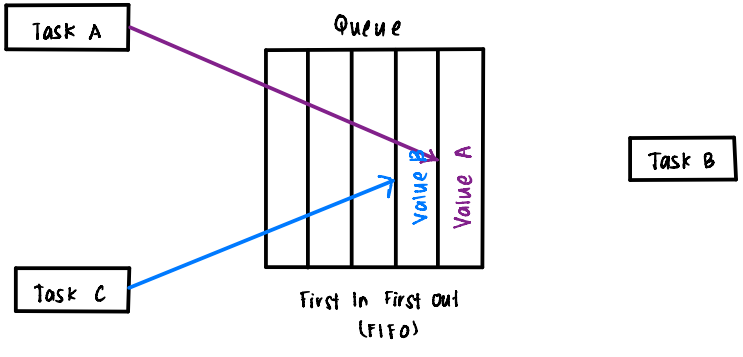
Queue

- Queue in real time operating system is a kernel object that is capable of passing information between tasks without incurring overwrites from other task.
- It is a first in, first out (FIFO) system where items are removed from the queue once read.



- One task change the value of global variable and another task read it.
- What happens if another task also wants to send same information to task B ?
- Queue allows to pass uninterrupted messages between tasks



- Task A can copy some data to queue and it appear at the front of queue.
- Using built-in kernel functions, writing to a queue is atomic which means another task cannot interrupt it.
- Adding something to queue is done by value, not by reference
- Whenever save something to the queue, the entire content of that variables are copied
- As long as there is enough memory, anything can be copied to them