

## Tutorial Activity 7

Anirudh Mungre - 100615309

Ethan Elliott - 100622168

### Concept Questions:

1. A signal is a interrupt that is sent to a process by the OS. These interrupts give instructions to the processes.
2. **SIGINT** interrupt the process.  
**SIGTSTP** suspends a process that can be resumed with SIGCONT. This can be sent through tty (ctrl+Z). This can be ignored but SIGSTOP cannot.  
**SIGCONT** resumes a suspended process.
3. **kill(pid\_t pid, int sig)** is a function that sends a signal to a process or group of processes specified by the passed pid and the signal sent is specified by sig.  
**waitpid(pid\_t pid, int \*status, int options)** is a function that waits for a state change. These two can be used to terminate a process and wait till it has ended before continuing by performing a waitpid() and then using kill() with SIGSTOP specifier. Once the state has changed then it will perform an action.
4. **Linked-list (queue)** is a data structure that orders elements by the **FIFO** method which means first in first out. This means that the first element to enter the queue with the enqueue() method will be the first element to be removed from the queue using the dequeue() method.
5. A linked list in c is a list that contains pointers to the next elements in the list. The first element is pointed to by the head, and the last element is pointed to by the tail. The elements are accessed by accessing the value of the memory address that is being pointed to. To add elements to the queue the head would need to point to the new element, the new element would need to point to the previous element that the head was pointing to. To remove elements, the tail would need to point to the previous element and the last element would need to be returned and deleted.