Threads and Processes cheat sheet

Threads

```
pthread_create(pthread_t *thread, NULL,
               void *(*start_routine) (void *), void *arg);
pthread_join(pthread_t thread, void **retval);

pthread_mutex_t mux = PTHREAD_MUTEX_INITIALIZER;
pthread_mutex_lock(ptherad_mutex_t *mutex);
pthread_mutex_unlock(ptherad_mutex_t *mutex);

pthread_barrier_t barrier;
pthread_barrier_init(pthread_barrier_t *barrier, NULL, unsigned count);
pthread_barrier_wait(pthread_barrier_t *barrier);

pthread_cond_t cond = PTHREAD_COND_INITIALIZER;
pthread_cond_wait(pthread_cond_t *cond, pthread_mutex_t *mutex);
pthread_cond_signal(pthread_cond_t *cond);
```

Processes

```
int   fork();
int   execvp(const char *file_name, char *const argv[]);
pid_t wait(int *status);
pid_t waitpid(pid_t pid, int *status, int options);
int   kill(pid_t pid, int sig);
int   signal(int signum, void (*sighandler)(int));
```

Sizes

1 byte	1 KB	1 MB	1 GB
8 bits	2^{10} bytes	2^{20} bytes	2^{30} bytes

2^2	2^3	2^4	2^5	2^6	2^7	2^8	2^9	2^{10}	2^{11}	2^{12}
4	8	16	32	64	128	256	512	1024	2048	4096