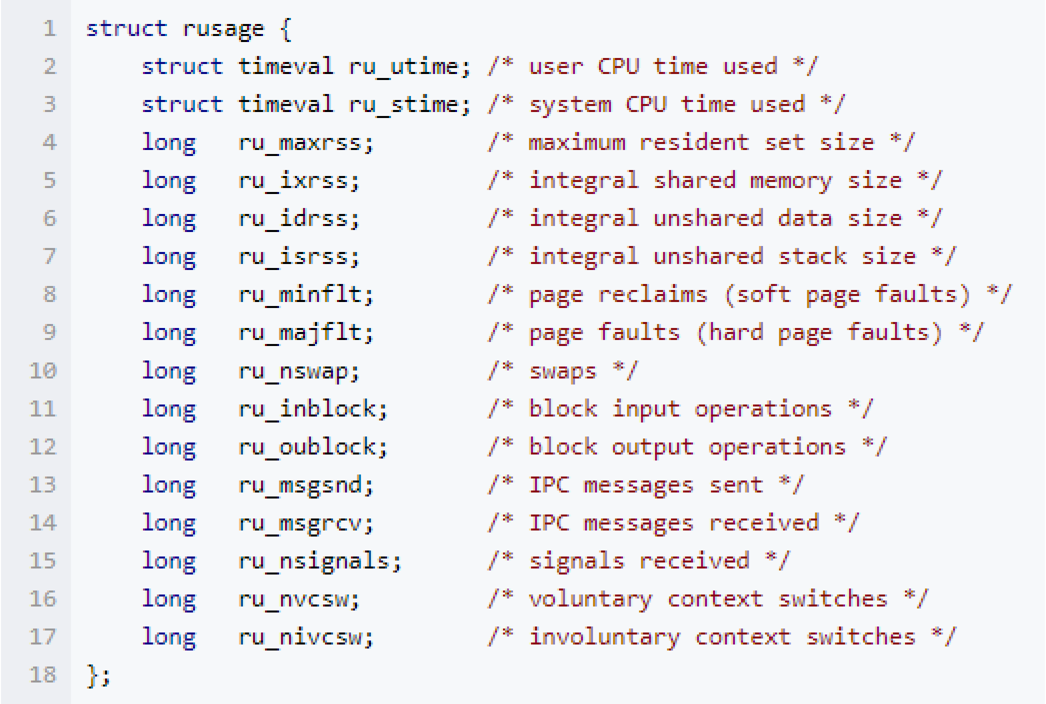
Cheat sheet

1. int getrusage(int who, struct rusage *usage);

The rusage structure:



```
struct rusage {
    struct timeval ru_utime; /* user CPU time used */
    struct timeval ru_stime; /* system CPU time used */
    long   ru_maxrss;        /* maximum resident set size */
    long   ru_ixrss;         /* integral shared memory size */
    long   ru_idrss;         /* integral unshared data size */
    long   ru_isrss;         /* integral unshared stack size */
    long   ru_minflt;        /* page reclaims (soft page faults) */
    long   ru_majflt;        /* page faults (hard page faults) */
    long   ru_nswap;         /* swaps */
    long   ru_inblock;       /* block input operations */
    long   ru_oublock;       /* block output operations */
    long   ru_msgsnd;        /* IPC messages sent */
    long   ru_msgrcv;        /* IPC messages received */
    long   ru_nsignals;      /* signals received */
    long   ru_nvcsw;         /* voluntary context switches */
    long   ru_nivcsw;        /* involuntary context switches */
};
```

The timeval structure:

long tv_sec; /* seconds */
long tv_usec; /*microseconds */

2. ssize_t write(int fd, const void *buf, size_t count);

write() writes up to count bytes from the buffer starting at buf to the file referred to by the file descriptor fd.

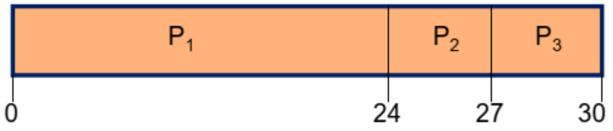
3. ssize_t read(int fd, void *buf, size_t count);

read() attempts to read up to count bytes from file descriptor fd into the buffer starting at buf.

5. int pipe(int pipefd[2]);

pipe() creates a pipe, a unidirectional data channel that can be used for interprocess communication. The array pipefd is used to return two file descriptors referring to the ends of the pipe. pipefd[0] refers to the read end of the pipe. pipefd[1] refers to the write end of the pipe.

4. One example of Gantt Chart


P_1
P_2
P_3
0
24
27
30