

USER IDENTIFICATION

To obtain the login name

```
#include <unistd.h>
char *getlogin (void);
```

Process times

```
#include <sys/times.h>
clock_t times (struct tms *buf);
```

Struct tms

```
{
    clock_t tms_utime;
    clock_t tms_stime;
    clock_t tms_cutime;
    clock_t tms_cstime;
}
```

```
#include<sys/times.h>
```

```
#include "ourhdr.h"
```

```
static void
```

```
    pr_times (clock_t, struct tms *, struct tms *);
```

```
static void    do_cmd(char *);
```

```
int main (int argc, char *argv[ ])
{
```

```
    int    i;
```

```
    for (i = 1; i < argc; i++)
```

```
        do_cmd(argv[i]);
```

```
    /* once for each command-line arg */
```

```
    exit(0);
```

```

}
static void
do_cmd (char *cmd)
/* execute and time the "cmd" */
{

struct tms    tmsstart, tmsend;
clock_t      start, end;
int          status;
fprintf(stderr, "\ncommand: %s\n", cmd);
if ( (start = times(&tmsstart)) == -1)
/* starting values */
    err_sys("times error");
if ( (status = system(cmd)) < 0)
/* execute command */
    err_sys("system() error");
if ( (end = times(&tmsend)) == -1)
/* ending values */
    err_sys("times error");
pr_times(end-start, &tmsstart, &tmsend);
    pr_exit(status);
}
static void
pr_times (clock_t real, struct tms *tmsstart,
          struct tms *tmsend)
{ static long clktck = 0;
  if (clktck == 0)
/* fetch clock ticks per second first time */
  if ( (clktck = sysconf(_SC_CLK_TCK)) < 0)
      err_sys("sysconf error");
  fprintf (stderr, " real: %7.2f\n", real / (double) clktck);
}

```

```
fprintf(stderr, " user: %7.2f\n", (tmsend->tms_utime - tmsstart->tms_utime) / (double)
clktck);
fprintf(stderr, " sys: %7.2f\n",
(tmsend->tms_stime - tmsstart->tms_stime) / (double) clktck);
fprintf(stderr, " child user: %7.2f\n", (tmsend->tms_cutime - tmsstart->tms_cutime) /
(double) clktck);
fprintf(stderr, " child sys: %7.2f\n", (tmsend->tms_cstime - tmsstart->tms_cstime) /
(double) clktck);
}
```

Source : <http://elearningatria.files.wordpress.com/2013/10/cse-iv-unix-and-shell-programming-10cs44-notes.pdf>