Code Modification Report

Makefile

Line 3 - 4

```
CS333_PROJECT ?= 2
PRINT_SYSCALLS ?= 0
```

Line 19 – 23

```
ifeq ($(CS333_PROJECT), 2)
CS333_CFLAGS += -DCS333_P1 -DUSE_BUILTINS -DCS333_P2
CS333_UPROGS += #_date _time _ps
CS333_TPROGS += _testsetuid  _testuidgid _p2-test
endif
```

p2-test.c

line 11 – 14

```
#define UIDGIDPPID_TEST
// #define CPUTIME_TEST
// #define GETPROCS_TEST
// #define TIME_TEST
```

usys.S

Line 34 – 38

SYSCALL(getuid)

SYSCALL(getgid)

SYSCALL(getppid)

SYSCALL(setuid)

SYSCALL(setgid)

Syscall.h

Line 25 – 29

```
#define SYS_getuid   SYS_date+1
#define SYS_getgid   SYS_getuid+1
#define SYS_getppid  SYS_getgid+1
#define SYS_setuid   SYS_getppid+1
#define SYS_setgid   SYS_setuid+1
```

proc.c

Line 10 – 12

```
#ifdef CS333_P2
#include "pdx.h"
#endif
```

Line 184 – 187

```
  #ifdef CS333_P2
  p->uid = DEFAULT_UID;
  p->gid = DEFAULT_GID;
  #endif // CS333_P2
```

Line 261 - 262

```
  np->uid = curproc->uid;
  np->gid = curproc->gid;
```

user.h

Line 32 - 39

```
// project 2
#ifdef CS333_P2
uint getuid(void);
uint getgid(void);
uint getppid(void);
int setuid(uint);
int setgid(uint);
#endif // CS333_P2
```

proc.h

Line 53 – 54

```
uint uid;
uint gid;
```

syscall.c

Line 114 -121

```
#ifdef CS333_P2
extern int sys_getuid(void);
extern int sys_getgid(void);
extern int sys_getppid(void);
extern int sys_setuid(void);
extern int sys_setgid(void);

#endif // CS333_P2
```

Line 153 – 159

```
#ifdef CS333_P2
[SYS_getuid]  sys_getuid,
[SYS_getgid]  sys_getgid,
[SYS_getppid] sys_getppid,
[SYS_setuid]  sys_setuid,
[SYS_setgid]  sys_setgid,
#endif
```

Line 192 – 198

```
#ifdef CS333_P2
  [SYS_getuid]  "getuid",
  [SYS_getgid]  "getgid",
  [SYS_getppid] "getppid",
  [SYS_setuid]  "setuid",
  [SYS_setgid]  "setgid",
#endif
```

sysproc.c

Line 90 – 126

```c
#ifdef CS333_P2
int
sys_getuid(void)
{
  return myproc()->uid;
}
int
sys_getgid(void)
{
  return myproc()->gid;
}
int
sys_getppid(void)
{
  if(myproc()->pid == 1)
    return myproc()->pid;
  return myproc()->parent->pid;
}
int
sys_setuid(void)
{
  int tmp;
  if(argint(0,&tmp) < 0 || tmp > 32767 || tmp < 0)
    return -1;
  myproc()->uid = (uint)tmp;
  return 0;
}
int
sys_setgid(void)
{
  int tmp;
  if(argint(0,&tmp) < 0 || tmp > 32767 || tmp < 0)
    return -1;
  myproc()->gid = (uint)tmp;
  return 0;
}
#endif
```