

# HOME ASSIGNMENT 1

## PART 2

ID:12341550

### STEP 1

FILE : proc.h

```
struct proc{  
...  
int perProcess;  
}
```

### STEP 2

FILE : syscall.h

```
#define SYS_setflag 23  
#define SYS_getflag 24
```

### STEP 3

FILE : syscall.c

```
...  
extern int sys_setflag(void);  
extern int sys_getflag(void);  
  
[SYS_setflag] sys_setflag,  
[SYS_getflag] sys_getflag,
```

### STEP 4

FILE : sysproc.c

```
int sys_setflag(void) {  
    int arg;  
    if(argint(0,&arg) < 0)  
        return -1;  
    myproc()->perProcess = arg;  
    return 0;  
}  
  
int sys_getflag(void) {  
    return myproc()->perProcess;  
}
```

## **STEP 5**

FILE : user.h

```
int setflag(int);  
int getflag(void);
```

## **STEP 6**

FILE : usys.S

```
SYSCALL(setflag)  
SYSCALL(getflag)
```

## **STEP 7**

FILE : testflag.c (new file)

```
#include "types.h"  
#include "stat.h"  
#include "user.h"  
int main(void){  
    setflag(1550);  
    int retrieve = getflag();  
    printf(1,"userflag value via getflag : %d\n",retrieve);  
  
    setflag(1551);  
    retrieve = getflag();  
    printf(1,"userflag value via getflag : %d\n",retrieve);  
    exit();  
}
```

## **FINAL STEP**

FILE : Makefile

UPROGS

...

    \_testflags\

## OUTPUT :

```
SeaBIOS (version 1.16.3-debian-1.16.3-2)
```

```
iPXE (https://ipxe.org) 00:03.0 CA00 PCI2.10 PnP PMM+1EFCB050+1EF0B050 CA00
```

```
Booting from Hard Disk...
```

```
cpu0: starting 0
```

```
sb: size 1000 nblocks 941 ninodes 200 nlog 30 logstart 2 inodestart 32 bmap start 58
```

```
init: starting sh
```

```
12341550$ testflags
```

```
userflag value via getflag : 1550
```

```
userflag value via getflag : 1551
```

```
12341550$
```