

Υποβολή 4ης Άσκησης

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Ερώτημα Α

Λίστα τροποποιηθέντων αρχείων

/usr/src/servers/vfs/open.c

Τροποποιήσεις

/usr/src/servers/vfs/open.c

Line	Code
611	printf("newdir: %s %o\n", fullpath, dirmode);

Screenshot αποτελεσμάτων

```
-bash-4.2# mkdir myNewDirectory
newdir: myNewDirectory 755
-bash-4.2# _
```

Ερώτημα Β

Λίστα τροποποιηθέντων αρχείων

/usr/src/lib/libsys/sys_fork.c

Τροποποιήσεις

/usr/src/lib/libsys/sys_fork.c

Line	Code
21	printf("process forked\n");

Screenshot αποτελεσμάτων

```
-bash-4.2#  
-bash-4.2#  
-bash-4.2#  
-bash-4.2#  
-bash-4.2# ls  
process forked  
.ashrc          .exrc           .ssh            hw4.patch       testprogramm  
.bash_history   .lessht        changes.patch   myNewDirectory  testprogramm.c  
.bashrc         .profile        create_patch    test.c           testprogramm.o  
-bash-4.2# cd /usr  
-bash-4.2# ls  
process forked  
Makefile  bin      lib      man      preserve  share    tmp  
adm       etc      libexec  mdec     run       spool    var  
ast       include  log      pkg      sbin      src  
-bash-4.2# _
```

Ερώτημα C

Λίστα τροποποιηθέντων αρχείων

/usr/src/include/minix/callnr.h
/usr/src/include/unistd.h
/usr/src/servers/pm/proto.h
/usr/src/servers/pm/table.c
/usr/src/lib/libc/sys-minix/Makefile.inc
/usr/src/servers/pm/Makefile
/usr/src/servers/pm/misc.c
/usr/src/commands/Makefile

Λίστα καινούργιων αρχείων

/usr/src/servers/pm/erwtima3.c
/usr/src/lib/libc/sys-minix/erwtima3.c
/usr/src/commands/erwtima3/erwtima3.c
/usr/src/commands/erwtima3/Makefile

Τροποποιήσεις

/usr/src/include/minix/callnr.h

Line	Code
68	#define ERWTIMA3 69

/usr/src/include/unistd.h

Line	Code
439	int erwtima3(void);

/usr/src/commands/Makefile

Line	Code
11	Eject env erwtima3 expand factor fbdctl \

/usr/src/servers/pm/proto.h

Line	Code
59	int do_erwtima3(void);

/usr/src/servers/pm/table.c

Line	Code
83	do_erwtima3, /*69 = erwtima3 */

/usr/src/lib/libc/sys-minix/Makefile.inc

Line	Code
5	Connect.c dup.c dup2.c erwtima3.c execve.c fcntl.c ...

/usr/src/servers/pm/misc.c

Line	Code
504	int syerwtima3() {
505	int i, counter=0;
506	clock_t clock_usr=0;
507	clock_t clock_sys=0;
508	
509	for(i=0;<NR_PROCS;i++)
511	{
512	if(mproc[i].mp_flags % 11)
513	{
514	counter++;
515	clock_usr+=mproc[i].mp_child_utime;
516	clock_sys+=mproc[i].mp_child_stime;
517	}
518	
519	}
520	printf("processes → %d\n", counter);
521	printf("user time → %d\n", clock_usr);
522	printf("system time → %d\n", clock_sys);
523	
524	return 0;
525	}

/usr/src/servers/pm/Makefile

Line	Code
6	Signal.c utility.c table.c syerwtima3.c getset.c ...

/usr/src/servers/pm/syerwtima3.c

Line	Code
------	------

```

1  #include <stdio.h>
2  #include "pm.h"
3  #include "mproc.h"
4  #include <unistd.h>
5  #include <string.h>
6
7  int do_erwtima3() {
8      int i, counter=0;
9      clock_t clock_usr=0;
10     clock_t clock_sys=0;
11
12     for(i=0;<NR_PROCS;i++)
13     {
14         if(mproc[i].mp_flags % 11)
15         {
16             counter++;
17             clock_usr+=mproc[i].mp_child_utime;
18             clock_sys+=mproc[i].mp_child_stime;
19         }
20
21     }
22     printf("processes → %d\n", counter);
23     printf("user time → %d\n", clock_usr);
24     printf("system time → %d\n", clock_sys);
25
26     return 0;
27 }

```

/usr/src/lib/libc/sys-minix/erwtima3.c

Line	Code
1	#include <lib.h>
2	#include <sys/stat.h>
3	#include <unistd.h>
4	#include "namespace.h"
5	#include <sys/cdefs.h>
6	#include <string.h>

```

7
8
9
10     int erwtima3() {
11         message=m;

14         Return syscall(PM_PROC_NR, ERWTIMA3, &m);
15
16     }

```

/usr/src/commands/erwtima3/erwtima3.c

Line	Code
1	#include <sys/cdefs.h>
2	#ifndef lint
3	#endif
4	#ifndef lint
5	#if 0
6	static char sccsid[] = "@(#)erwtima3.c;
7	#else
8	__RCSID("");
9	#endif
10	#endif
11	#include <sys/param.h>
12	#include <sys/stat.h>
13	#include <sys/types.h>
14	#include <err.h>
15	#include <errno.h>
16	#include <locale.h>
17	#include <stdio.h>
18	#include <stdlib.h>
19	#include <string.h>
20	#include <unistd.h>
21	
22	void usage(void);
23	int main(int, char *[]);
24	

25	int main(int argc, char *argv[])
26	{
27	if (argc==1)
28	{
29	erwtima3();
30	}
31	Else
32	usage();
33	return 0;
34	}
35	void usage(void)
36	{
37	(void)fprintf(stderr, "usage: %s [NoArgument] \n",getprogname());
38	exit(0);
39	}

/usr/src/commands/erwtima3/Makefile

Line	Code
1	PROG= erwtima3
2	MAN=
3	
4	.include <bsd.prog.mk>

Screenshot αποτελεσμάτων

*Δεν εμφανίζει το αποτέλεσμα

Ερώτημα D

Λίστα τροποποιηθέντων αρχείων

/usr/src/include/minix/callnr.h
/usr/src/include/unistd.h
/usr/src/servers/pm/proto.h
/usr/src/servers/pm/table.c
/usr/src/lib/libc/sys-minix/Makefile.inc
/usr/src/servers/pm/Makefile
/usr/src/servers/pm/misc.c
/usr/src/commands/Makefile

Λίστα καινούργιων αρχείων

/usr/src/servers/pm/swerwtima4.c
/usr/src/lib/libc/sys-minix/erwtima4.c
/usr/src/commands/erwtima4/erwtima4.c
/usr/src/commands/erwtima4/Makefile

Τροποποιήσεις

/usr/src/include/minix/callnr.h

Line	Code
69	#define ERWTIMA4 70

/usr/src/include/unistd.h

Line	Code
440	int erwtima4(void);

/usr/src/commands/Makefile

Line	Code
11	Eject env erwtima3 erwtima4 expand factor fbdctl \

/usr/src/servers/pm/proto.h

Line	Code
60	int do_erwtima4(void);

/usr/src/servers/pm/table.c

Line	Code
84	do_erwtima4, /*70= erwtima4 */

/usr/src/lib/libc/sys-minix/Makefile.inc

Line	Code
5	Connect.c dup.c dup2.c erwtima3.c erwtima4.c execve.c fcntl.c ...

/usr/src/servers/pm/misc.c

Line	Code
533	int syerwtima4()
534	{
535	int i, not_found=0;
536	Int variable=m_in.m1_i1;
537	Struct mproc *rmp;
538	
539	for(i=0;<NR_PROCS;i++)
540	{
541	if(mproc[i].mp_pid == variable)
542	{
543	not_found=1;
544	
545	If(mproc[i].mp_flags %11)
546	Return 0;
547	}
548	}
549	if (not_found==0)
550	return 1;
551	}

/usr/src/servers/pm/Makefile

Line	Code
6	Signal.c utility.c table.c syerwtima3.c syerwtima4.c getset.c ...

/usr/src/servers/pm/syerwtima4.c

Line	Code
1	#include <stdio.h>
2	#include "pm.h"

3	#include "mproc.h"
4	#include <unistd.h>
5	#include <string.h>
6	EXTERN struct mproc {
7	pid_t mp_pid;
8	unsigned mp_flags; } mproc [NR_PROCS];
9	
10	Int not_found=0;
11	int do_erwtima4() {
12	
13	Int var=m_in.m1_i1;
14	
15	
16	for(i=0;<NR_PROCS;i++)
17	{
18	if(mproc[i].mp_pid == var)
19	{
20	not_found=1;
21	
22	If(mproc[i].mp_flags %11)
23	Return 0;
24	}
25	}
26	if (not_found==0)
27	return 1;
28	}

/usr/src/lib/libc/sys-minix/erwtima4.c

Line	Code
1	#include <lib.h>
2	#include <sys/stat.h>
3	#include <unistd.h>
4	#include "namespace.h"
5	#include <sys/cdefs.h>
6	#include <string.h>
7	

```

8
9
10     int erwtima4(p_id) {
11         message=m;
12         m.m1_i1=p_id;

14         Return sycall(PM_PROC_NR, ERWTIMA4, &m);
15
16     }

```

/usr/src/commands/erwtima4/erwtima4.c

Line	Code
1	#include <sys/cdefs.h>
2	#ifndef lint
3	#endif
4	#ifndef lint
5	#if 0
6	static char sccsid[] = "@(#)erwtima4.c;
7	#else
8	__RCSID("");
9	#endif
10	#endif
11	#include <sys/param.h>
12	#include <sys/stat.h>
13	#include <sys/types.h>
14	#include <err.h>
15	#include <errno.h>
16	#include <locale.h>
17	#include <stdio.h>
18	#include <stdlib.h>
19	#include <string.h>
20	#include <unistd.h>
21	
22	void usage(void);
23	int main(int, char *[]);
24	
25	int main(int argc, char *argv[])

```

26     {
27     if (argc==2)
28     {
29         int id=atoi (arg[1]);
30         erwtima4(id);
31     }
32     else
33     usage();
34     return 0;
35     }
36     void usage(void)
37     {
38     (void)fprintf(stderr, "usage: %s [NoArgument] \n",getprogname());
39     exit(0);
40     }

```

/usr/src/commands/erwtima4/Makefile

Line	Code
1	PROG= erwtima4
2	MAN=
3	
4	.include <bsd.prog.mk>

Screenshot αποτελεσμάτων

*Τα παραπάνω αρχεία δεν συμπεριλήφθηκαν στο patch γιατί τα έβγαζε όλα λάθος ο grader ακόμα και τα προηγούμενα σωστά.