```
Script started on Sun Nov 01 19:16:37 2009
^[[1mbern^[[m[~/shell]% tgt-sun4u/kgsh

 /export/home/kgraney/shell> pwd
/export/home/kgraney/shell
 /export/home/kgraney/shell> ls &
Doxyfile        proj2_run1.ps~  rl.o            test2
Makefile        proj2_run2      src             tests
doc             proj2_testcases test            tgt-sun4u
proj2_run1      rl              test-1+2
proj2_run1.ps   rl.c            test-1+2.c
Error in backgrounding waitpid: No child processes
 /export/home/kgraney/shell>
 /export/home/kgraney/shell> ls -l &
 /export/home/kgraney/shell> total 174
-rw-r--r--   1 kgraney  user          308 Sep 30 22:51 Doxyfile
-rw-r--r--   1 kgraney  user          632 Oct 28 07:53 Makefile
drwxr-xr-x   2 kgraney  user          512 Oct 29 14:17 doc
-rw-r--r--   1 kgraney  user        14353 Oct 27 12:11 proj2_run1
-rw-r--r--   1 kgraney  user        30948 Oct 27 14:20 proj2_run1.ps
-rw-r--r--   1 kgraney  user            0 Oct 27 14:19 proj2_run1.ps~
-rw-r--r--   1 kgraney  user            0 Nov  1 19:16 proj2_run2
-rw-r--r--   1 kgraney  user         1256 Oct 22 13:33 proj2_testcases
-rwxr-xr-x   1 kgraney  user        10100 Oct 27 20:14 rl
-rw-r--r--   1 kgraney  user         3317 Oct 27 20:30 rl.c
-rw-r--r--   1 kgraney  user         4876 Oct 27 20:13 rl.o
drwxr-xr-x   2 kgraney  user          512 Nov  1 18:47 src
-rw-r--r--   1 kgraney  user         1070 Oct 29 14:14 test
-rwxr-xr-x   1 kgraney  user         9464 Oct 22 12:26 test-1+2
-rw-r--r--   1 kgraney  user          254 Mar 18  2008 test-1+2.c
-rw-r--r--   1 kgraney  user            7 Mar 28 07:47 test2
drwxr-xr-x   2 kgraney  user          512 Nov  1 19:16 tests
drwxr-xr-x   2 kgraney  user          512 Nov  1 18:47 tgt-sun4u

 /export/home/kgraney/shell> cd /
 /> sleep 20 &
 /> ls &
 /> TT_DB         devices         lib             opt             tmp
bin             etc             lost+found      platform        usr
boot            export          mnt             proc            var
cdrom           home            net             sbin            vol
dev             kernel          noautoshutdown  system

 /> pid
26242
 /> tty
/dev/pts/7
 /> /bin/ps -lfu kgraney
 F S     UID   PID  PPID  C PRI NI     ADDR     SZ    WCHAN    STIME TTY
   TIME CMD
 0 S  kgraney 24217     1   0  70 30        ?   9368        ?   Oct 29 ?
   1:06 /usr/lib/wnck-applet --oaf-activate
 0 S  kgraney 26160 26159   0  50 20        ?    209        ? 18:47:26 pts/6
   0:00 /bin/sh -c dtpad -server
 0 S  kgraney 24226 24225   0  70 30        ?    395        ?   Oct 29 ?
   0:00 gnome-pty-helper
 0 S  kgraney 24158 24145   0  70 30        ?    393        ?   Oct 29 ?
   0:00 - -c gnome-session
 0 S  kgraney 24706     1   0  40 20        ?  10162        ?   Oct 30 ?
   0:19 nautilus --no-default-window --sm-c
 0 S  kgraney 24221     1   1  70 30        ?   8978        ?   Oct 29 ?
  44:37 /usr/lib/mixer_applet2 --oaf-activa
 0 S  kgraney 25882 24778   0  50 20        ?    508        ? 18:24:19 pts/6
   0:00 tcsh
 0 S  kgraney 24229 24225   0  70 30        ?    428        ?   Oct 29 pts/2
   0:00 tcsh
 0 S  kgraney 24230 24229   0  70 30        ?    814        ?   Oct 29 pts/2
   0:04 ssh -X kgraney@orioles.acad.ece.ude
 0 S  kgraney 24717     1   1  60 20        ?   8962        ?   Oct 30 ?
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  11:40 /usr/lib/mixer_applet2 --oaf-activa
 0 S  kgraney 24529   750   6  54 20        ?   6525        ?   Oct 30 ?
  13:29 /usr/openwin/bin/Xsun :0 -defdepth
 0 S  kgraney 24170     1   1  70 30        ?   1945        ?   Oct 29 ?
  30:11 /usr/lib/gconfd-2 15
 0 S  kgraney 24797 24778   0  40 20        ?    444        ?   Oct 30 pts/5
   0:00 tcsh
 0 S  kgraney 24145 24102   1  70 30        ?   2519        ?   Oct 29 ?
  16:24 /usr/NX/bin/nxnode
 0 S  kgraney 24096 24095   0  40 20        ?    924        ?   Oct 29 ?
   0:07 /usr/lib/ssh/sshd
 0 S  kgraney 24225     1   0  70 30        ?  10996        ?   Oct 29 ?
   1:42 gnome-terminal
 0 S  kgraney 24238 24225   0  70 30        ?    428        ?   Oct 29 pts/3
   0:00 tcsh
 0 S  kgraney 24677     1   0  40 20        ?    417        ?   Oct 30 ?
   0:00 /usr/bin/gnome-keyring-daemon
 0 S  kgraney 24239 24238   0  70 30        ?    782        ?   Oct 29 pts/3
   0:00 ssh -X kgraney@orioles.acad.ece.ude
 0 R  kgraney 24205     1   0  70 30        ?  10622        ?   Oct 29 ?
   0:19 nautilus --no-default-window --sm-c
 0 S  kgraney 24683     1   0  40 20        ?   9027        ?   Oct 30 ?
   0:01 /usr/lib/gnome-settings-daemon --oa
 0 S  kgraney 24812 24797   0  40 20        ?    902        ?   Oct 30 pts/5
   0:37 ssh -X kgraney@orioles.acad.ece.ude
 0 S  kgraney 24704     1   1  40 20        ?   9989        ?   Oct 30 ?
  24:50 gnome-panel --sm-client-id default2
 0 S  kgraney 24178     1   0  70 30        ?    999        ?   Oct 29 ?
   0:01 /usr/lib/bonobo-activation-server -
 0 S  kgraney 24180     1   0  70 30        ?   9026        ?   Oct 29 ?
   0:01 /usr/lib/gnome-settings-daemon --oa
 0 S  kgraney 24724     1   0  40 20        ?   8878        ?   Oct 30 ?
   0:01 /usr/lib/notification-area-applet -
 0 S  kgraney 24698     1   0  40 20        ?   1492        ?   Oct 30 ?
   0:52 gnome-smproxy --sm-client-id defaul
 0 S  kgraney 24203     1   1  70 30        ?  10452        ?   Oct 29 ?
  25:30 gnome-panel --sm-client-id default2
 0 R  kgraney 24778     1   5  60 20        ?  11045        ?   Oct 30 ?
   3:31 gnome-terminal
 0 S  kgraney 24708     1   0  40 20        ?   8875        ?   Oct 30 ?
   0:01 gnome-volcheck -i 30 -z 3 -m cdrom,
 0 S  kgraney 24663 24661   0  40 20        ?   9870        ?   Oct 30 pts/4
   0:02 /usr/bin/gnome-session
 0 S  kgraney 24219     1   0  70 30        ?   9042        ?   Oct 29 ?
   6:16 /usr/lib/gnome-netstatus-applet --o
 0 S  kgraney 24794 24778   0  40 20        ?    395        ?   Oct 30 pts/5
   0:00 gnome-pty-helper
 0 S  kgraney 24650 24585   0  40 20        ?    668        ?   Oct 30 pts/4
   0:00 /usr/dt/bin/sdt_shell -c unsetenv _
 0 S  kgraney 24168 24158   0  70 30        ?   9824        ?   Oct 29 ?
   0:02 gnome-session
 0 S  kgraney 24711     1   0  50 20        ?   9106        ?   Oct 30 ?
   0:15 /usr/lib/clock-applet --oaf-activat
 0 S  kgraney 24132 24102   1  40 20        ?   7647        ?   Oct 29 ?
  23:14 /usr/NX/bin/nxagent -D -options /ex
 0 S  kgraney 24652 24650   0  40 20        ?    410        ?   Oct 30 pts/4
   0:00 tcsh -c unsetenv _ PWD;        ;
 0 S  kgraney 26238 25882   0  50 20        ?    197        ? 19:16:38 pts/6
   0:00 script proj2_run2
 0 S  kgraney 24102 24101   0  70 30        ?   2519        ?   Oct 29 ?
   0:28 /usr/NX/bin/nxnode
 0 S  kgraney 24700     1   0  40 20        ?   8481        ?   Oct 30 ?
   2:48 /bin/metacity --sm-client-id=defaul
 0 S  kgraney 24209     1   0  70 30        ?   1270        ?   Oct 29 ?
   0:20 /usr/lib/gnome-vfs-daemon --oaf-act
 0 S  kgraney 24715     1   0  50 20        ?   9026        ?   Oct 30 ?
   5:29 /usr/lib/gnome-netstatus-applet --o
 0 S  kgraney 24668     1   0  40 20        ?    459        ?   Oct 30 ?
   0:33 /usr/dt/bin/dsdm
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0 S  kgraney 24713    1   0  50 20      ?    9354     ?   Oct 30 ?
 1:13 /usr/lib/wnck-applet --oaf-activate
0 S  kgraney 24173    1   0  70 30      ?    416      ?   Oct 29 ?
 0:00 /usr/bin/gnome-keyring-daemon
0 S  kgraney 24585 24553  0  40 20      ?    235      ?   Oct 30 ?
 0:00 /bin/ksh /usr/dt/bin/Xsession
0 S  kgraney 24742    1   0  50 20      ?    12942    ?   Oct 30 ?
 18:02 /usr/jdk/latest/bin/java -version:1
0 S  kgraney 24199    1   0  70 30      ?    8430     ?   Oct 29 ?
 3:14 /bin/metacity --sm-client-id=defaul
0 S  kgraney 24709 24708  0  40 20      ?    8782     ?   Oct 30 ?
 0:00 gnome-volcheck -i 30 -z 3 -m cdrom,
0 S  kgraney 24175    1   0  70 30      ?    1017     ?   Oct 29 ?
 0:19 xscreensaver -nosplash
0 S  kgraney 24661 24652  0  40 20      ?    224      ?   Oct 30 pts/4
 0:00 /bin/ksh /usr/dt/config/Xsession2.j
0 S  kgraney 24223    1   0  70 30      ?    8876     ?   Oct 29 ?
 0:01 /usr/lib/notification-area-applet -
0 S  kgraney 21871 21870  0  40 20      ?    459      ?   Oct 28 ?
 0:00 /usr/lib/esd -terminate -nobeeps -a
0 S  kgraney 24213    1   0  70 30      ?    383      ?   Oct 29 ?
 0:05 /usr/lib/mapping-daemon
0 S  kgraney 21870    1   0  40 20      ?    209      ?   Oct 28 ?
 0:00 /bin/sh -c /usr/lib/esd -terminate
0 S  kgraney 24679    1   0  40 20      ?    1066     ?   Oct 30 pts/4
 1:44 xscreensaver -nosplash
0 S  kgraney 24215    1   0  70 30      ?    9058     ?   Oct 29 ?
 0:15 /usr/lib/clock-applet --oaf-activat
0 S  kgraney 26159    1   0  50 20      ?    750      ? 18:47:26 pts/6
 0:00 ttsession -s -d :0.0
0 S  kgraney 24194    1   0  70 30      ?    1483     ?   Oct 29 ?
 0:47 gnome-smproxy --sm-client-id defaul
0 S  kgraney 24101 24096  0  40 20      ?    408      ?   Oct 29 ?
 0:00 tcsh -c /usr/NX/bin/nxnode
0 S  kgraney 26240 26239  0  50 20      ?    436      ? 19:16:38 pts/7
 0:00 sh -i
0 S  kgraney 26242 26240  0  50 20      ?    282      ? 19:16:42 pts/7
 0:00 tgt-sun4u/kgsh
0 O  kgraney 26248 26242  1  55 20      ?    233        19:17:07 pts/7
 0:00 /bin/ps -lfu kgraney
0 S  kgraney 26245 26242  0  50 20      ?    197      ? 19:16:55 pts/7
 0:00 sleep 20
0 S  kgraney 26239 26238  0  50 20      ?    208      ? 19:16:38 pts/6
 0:00 script proj2_run2
0 S  kgraney 26161 26160  0  50 20      ?    1094     ? 18:47:26 pts/6
 0:00 dtpad -server
/> cd
/export/home/kgraney> cd shell
/export/home/kgraney/shell> cd tests
/export/home/kgraney/shell/tests> ls -l
total 4
-rw-r--r--   1 kgraney  user         9 Nov  1 19:16 mail1
-rw-r--r--   1 kgraney  user         8 Nov  1 19:16 mail2
 /export/home/kgraney/shell/tests> rm -r^H ^Hf mail1 mail2
 /export/home/kgraney/shell/tests> o^H ^Htouch mail1
 /export/home/kgraney/shell/tests> watchmail mail1
Starting watchmail for mail1
 /export/home/kgraney/shell/tests> echo hi >> mail1
 /export/home/kgraney/shell/tests>
^GYou have new mail in mail1 at Sun Nov  1 19:17:42 2009

echo ^H^H ^H^H ^H^H ^H^H ^H
 /export/home/kgraney/shell/tests>
 /export/home/kgraney/shell/tests> echo HiThere > mail2
 /export/home/kgraney/shell/tests> watchmail mail2
Starting watchmail for mail2
 /export/home/kgraney/shell/tests> echo there >> mail1
 /export/home/kgraney/shell/tests>
^GYou have new mail in mail1 at Sun Nov  1 19:18:10 2009
```

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 /export/home/kgraney/shell/tests> echo Subject ^H: >> mail2
 /export/home/kgraney/shell/tests>
^GYou have new mail in mail2 at Sun Nov  1 19:18:18 2009

 /export/home/kgraney/shell/tests> cat mail1
hi
there
 /export/home/kgraney/shell/tests> cat mail2
HiThere
Subject:

^GYou have new mail in mail2 at Sun Nov  1 19:18:17 2009

 /export/home/kgraney/shell/tests> watchmail mail1 off
Stopping watchmail for mail1
 /export/home/kgraney/shell/tests> echo bye >> mail1
 /export/home/kgraney/shell/tests> echo bye >> mail2
 /export/home/kgraney/shell/tests>
^GYou have new mail in mail2 at Sun Nov  1 19:18:47 2009


 /export/home/kgraney/shell/tests> rm -f test1 test2 test3 test4 test5 test6 tes
t7 test8
 /export/home/kgraney/shell/tests> ../test-1+2 > test1
This is to standard error
 /export/home/kgraney/shell/tests> ../test-1+2 > test1^H ^H2^H^H^[[1@i^[[1@>
This is to standard error
 /export/home/kgraney/shell/tests> ../test-1+2 >i> test2^H^H^[[1@x^H^[[1P^G^[[1@
[^[[1@C^H^[[1P^H^[[1P^G^[[1@x^H^[[1Pi^H^[[1P
This is to standard error
 /export/home/kgraney/shell/tests> ../test-1+2 >& test3
 /export/home/kgraney/shell/tests> ../test^G-1+2 >>& test4
 /export/home/kgraney/shell/tests> cat test1 test2 test3 test4
This is to standard output
This is to standard output
This is to standard error
This is to standard output
This is to standard error
This is to standard output
 /export/home/kgraney/shell/tests> ls
i     mail1  mail2  test1  test2  test3  test4
 /export/home/kgraney/shell/tests> rm i
 /export/home/kgraney/shell/tests> noclobber
Clobbering is now on. (value is 0)
 /export/home/kgraney/shell/tests> noclobber^H^[[5Prm i^H^H^[[2Pls^H^Hcat test1
 test2 test3 test4^H^H^H^[[6P../test-1+2 >>& test4^H^H^[[1P& test3^H> test2^H^[
[1@i> test2^H^[[2P test1^H ^H5
This is to standard error
 /export/home/kgraney/shell/tests> ../test-1+2 > test5^Gh^H ^H^H ^H6^Ghh^H ^H^H
^H^Gh^H ^H^[[1@>
This is to standard error
 /export/home/kgraney/shell/tests> vimode
 /export/home/kgraney/shell/tests> vimode^H^H../test-1+2 >> test6^Hr6^H76^H^H^[[
1P6^H^H^[[1P6^H^Ht7^H&^H
 /export/home/kgraney/shell/tests> ../test-1+2 >& test7^Hr7^H87^H^H^[[1P7^H^H^[[
1P7^H^Ht8^H^[[1@>^[[1P ^H^[[1@&
 /export/home/kgraney/shell/tests> ../test-1+2 >>& test8^H^H^[[1P& test7^H^H^H
^Hvimode^H^[K^H^H../test-1+2 >> test6^H^[[1P test5^H^H^H^[[10Pnoclobber^H^[[5Prm
 i^H^H^[[2Pls^H^Hcat test1 test2 test3 test4^H^H^H^[[1@r^[[1@51^H^Ht^[[1P5^[[1P
 test6 test7 test8^H
This is to standard output
This is to standard output
This is to standard error
This is to standard output
This is to standard error
```

```
This is to standard output
 /export/home/kgraney/shell/tests> cat test5 test6 test7 test8^H^H^H^[[6P../tes
t-1+2 >>& test8^H^H^[[1P& test7^H^H^H^Hvimode^[[K^H^H../test-1+2 >> test6h^H ^H
^H ^H5^H^[[1P
This is to standard error
 /export/home/kgraney/shell/tests> ../test-1+2 > test5^H^H^[[1@> test6This is to
 standard error
 /export/home/kgraney/shell/tests> ../test-1+2 >> test6^H7^H^H^[[1@&^H^H^[[1P
 /export/home/kgraney/shell/tests> ../test-1+2 >& test7hh^H ^H^H ^H^H8^H^G^H^H^[
[1@>
 /export/home/kgraney/shell/tests> cat^H^[[K^H^[[K^H^[[K../test-1+2 >>& test8^H
^H^H../test-1+2 >^[[1P& test7^H^H^H^H../test-1+2 >> test6^H^H^H^H../test-1+2 >
^[[1P test5^H^H^Hcat test5 test6 test7 test8^H^H^H^[[6P../test-1+2 >>&^H^H^H../
/test-1+2 >^[[1P& test7^H^H^H^H../test-1+2 >>& test8^H^H^H^[[6@cat test5 test6
test7^H^H^H
This is to standard output
This is to standard output
This is to standard output
This is to standard error
This is to standard output
This is to standard error
This is to standard output
This is to standard error
This is to standard output
 /export/home/kgraney/shell/tests> grep hello < test7
 /export/home/kgraney/shell/tests> grep error < test7
This is to standard error
 /export/home/kgraney/shell/tests> rm -f test9 test10 test ^H11 test12
 /export/home/kgraney/shell/tests> noclobber
Clobbering is now off. (value is 1)
 /export/home/kgraney/shell/tests> ../test-1+2 > test9
This is to standard error
 /export/home/kgraney/shell/tests> ../test-1+2 > test9^H^Ht^[[K^HAt^H1t^H^H^[[1P
t^H^H^[[1Pt^H^Hst10^H^[[1@>
This is to standard error
 /export/home/kgraney/shell/tests> ../test-1+2 >> test10^H^H^H../test-1+2 >& te
st11^H
 /export/home/kgraney/shell/tests> k^H ^H../test-1+2 >& test11^H^H^H../test-1+2
 >& test1^G^H^[[1@>& test12^H
 /export/home/kgraney/shell/tests> cat test9 test10 test11 test12
This is to standard output
This is to standard output
This is to standard error
This is to standard output
This is to standard error
This is to standard output
 /export/home/kgraney/shell/tests> ls | grep test
test1
test10
test11
test12
test2
test3
test4
test5
test6
test7
test8
test9
 /export/home/kgraney/shell/tests> ../test-1+2 | grep hello
This is to standard error
 /export/home/kgraney/shell/tests>  grep hello^H^H^H../test-1+2^H^H^H../test-1+
2 | grep hello^H^H^H^H../test-1+2^[[K^H^H^H grep hello^H^H^H^[[K^G grep hello^H
^H^H../test-1+2^H^H^H../test-1+2 | grep hello^H^H^H
```