



Applications

Places

System



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shpower.sh

testfile

shell14.sh

output

1 unix is a great operating system
2 Unix is open source
3 unix is free os
4 learn os
5 unixLinux which one you want to use|

|



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shpower.sh X



testfile X



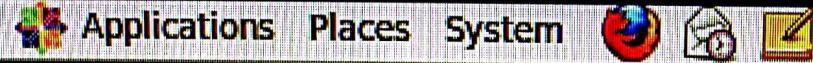
shell14.sh X



output

```
1 #!/bin/bash
2 echo enter n1 and n2
3 read a b
4 echo numbers are $a and $b
5 pow=$((echo ${a}^${b} | bc))
6 echo power is $pow
7 d=$((echo "sqrt($a)" | bc))
8 echo square root is $d
9
```

I



2yrgr2@

File Edit View Search Terminal Help

```
[2yrgr2@localhost CSE_2_042]$ ls -l shell|grep '^-' > file1
[2yrgr2@localhost CSE_2_042]$ cat file1 | tr -s ' '|cut -d ' ' -f5,9 > file2
[2yrgr2@localhost CSE_2_042]$ cat file1
-rw-rw-r--. 1 2yrgr2 2yrgr2 322 Aug 21 16:08 shell10.sh
-rw-rw-r--. 1 2yrgr2 2yrgr2 108 Aug 21 16:22 shell11.sh
-rw-rw-r--. 1 2yrgr2 2yrgr2 205 Aug 21 16:50 shell12.sh
-rw-rw-r--. 1 2yrgr2 2yrgr2 137 Aug 21 17:04 shell13.sh
-rw-rw-r--. 1 2yrgr2 2yrgr2 101 Aug 28 15:17 shell14.sh
-rwxrw-r--. 1 2yrgr2 2yrgr2 141 Jul 24 16:53 shell1.sh
-rwxrw-r--. 1 2yrgr2 2yrgr2 170 Aug 7 15:37 shell2.sh
-rw-rw-r--. 1 2yrgr2 2yrgr2 104 Aug 7 16:09 shell3.sh
-rwxrw-r--. 1 2yrgr2 2yrgr2 115 Aug 7 16:18 shell4.sh
-rw-rw-r--. 1 2yrgr2 2yrgr2 315 Aug 7 16:36 shell5.sh
-rwxrw-r--. 1 2yrgr2 2yrgr2 615 Aug 21 15:43 shell_add.sh
-rw-rw-r--. 1 2yrgr2 2yrgr2 204 Aug 7 15:52 shellarr.sh
-rw-rw-r--. 1 2yrgr2 2yrgr2 157 Aug 28 14:56 shpower.sh
[2yrgr2@localhost CSE_2_042]$ cat file2
322 shell10.sh
108 shell11.sh
205 shell12.sh
137 shell13.sh
101 shell14.sh
141 shell1.sh
170 shell2.sh
104 shell3.sh
115 shell4.sh
315 shell5.sh
615 shell_add.sh
204 shellarr.sh
157 shpower.sh
[2yrgr2@localhost CSE_2_042]$
```

2yrgr2

CSE_2_042

2yrgr2@localhost:~/C...

D



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file2 X

shell15.sh X

shell10.sh X

```
1 #!/bin/bash
2 sum=0
3 while read line
4 do
5     sz=`echo $line |cut -d ' ' -f1`
6     sum=`expr $sz + $sum`
7     name=`echo $line |cut -d ' ' -f2`
8     echo $name
9 done < $1
10 echo sum of files is $sum
11
```



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file2 X



shell15.sh X



shell10.sh X

1	322	shell10.sh
2	108	shell11.sh
3	205	shell12.sh
4	137	shell13.sh
5	101	shell14.sh
6	141	shell1.sh
7	170	shell2.sh
8	104	shell3.sh
9	115	shell4.sh
10	315	shell5.sh
11	615	shell_add.sh
12	204	shellarr.sh
13	157	shpower.sh



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```
[2yrgr2@localhost CSE_2_042]$ sh shell15.sh file2
shell10.sh
shell11.sh
shell12.sh
shell13.sh
shell14.sh
shell1.sh
shell2.sh
shell3.sh
shell4.sh
shell5.sh
shell_add.sh
shellarr.sh
shpower.sh
sum of files is 2694
[2yrgr2@localhost CSE_2_042]$
```



Applications Places System



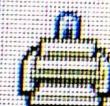
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shell16.sh X

```
1 #!/bin/bash
2 bytes=`cat $1|wc -c`
3 lines=`cat $1|wc -l`
4 char=`cat $1|wc -m`
5 word=`cat $1|wc -w`
6 printf "filename=$1 \n"
7 echo bytes=$bytes
8 echo lines=$lines
9 echo char=$char
10 echo word=$word
```



Applications Places System



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```
[2yrgr2@localhost CSE_2_042]$ gedit shell16.sh
[2yrgr2@localhost CSE_2_042]$ sh shell16.sh testfile
filename=testfile
bytes=114
lines=5
char=114
word=23
[2yrgr2@localhost CSE_2_042]$ █
```

Applications Places System

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orphan.c day4.c

```
1 #include<stdio.h>
2 #include<sys/types.h>
3 #include<sys/wait.h>
4 #include<stdlib.h>
5 #include<unistd.h>
6 void main()
7 {
8     pid_t pid;
9     if((pid=fork()) > 0)
10    {
11        printf("parent(%d): i have a child = %d\n",getpid(),pid);
12        exit(0);
13    }
14    else if(pid==0)
15    {
16        sleep(3);
17        printf("child(%d): my parent id= %d\n",getpid(),getppid());
18        exit(0);
19    }
20    else
21        printf("problem with child creation\n");
22 }
```

File Edit View Search Terminal Help

```
[2yrgr2@localhost CSE_2_042]$ gcc orphan.c -o try
[2yrgr2@localhost CSE_2_042]$ ./try
parent(14912):i have a child = 14913
[2yrgr2@localhost CSE_2_042]$ child(14913):my parent id= 1
```



Applications

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System



2yrgr2

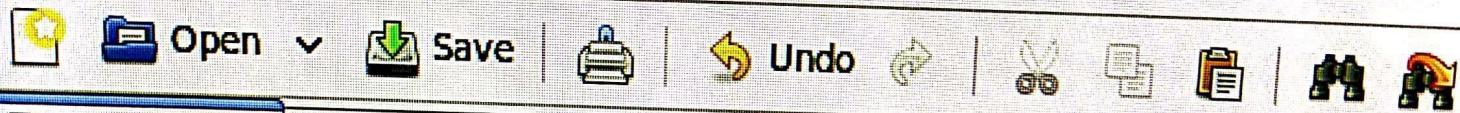
2yrgr2@localhost:~/CSE_2_042

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```
[2yrgr2@localhost CSE_2_042]$ ps -eaf|grep -e "init"
root      1      0  0 14:51 ?        00:00:00 /sbin/init
2yrgr2  14984 14952  0 16:03 pts/1    00:00:00 grep -e init
[2yrgr2@localhost CSE_2_042]$ █
```



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orphan.c X day4.c X

```
1 #include<stdio.h>
2 #include<sys/types.h>
3 #include<sys/wait.h>
4 #include<stdlib.h>
5 #include<unistd.h>
6 void main()
7 {
8     pid_t pid;
9     if((pid=fork()) > 0)
10    {
11         printf("parent(%d): i have a child = %d\n",getpid(),pid);
12         exit(0);
13     }
14     else if(pid==0)
15    {
16         sleep(10);
17         printf("child(%d): my parent id= %d \n",getpid(),getppid());
18         exit(0);
19     }
20     else
21         printf("problem with child creation\n");
22 }
```

2yrgr2

CSE_2_042

2yrgr2@localhost:~/C...



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```
[2yrgr2@localhost CSE_2_042]$ ps aux | grep pts/0
2yrgr2  3380  0.0  0.0 108332  1856 pts/0    Ss+  14:53   0:00 /bin/bash
2yrgr2  15117  0.0  0.0 103240   856 pts/1    S+   16:16   0:00 grep pts/0
[2yrgr2@localhost CSE_2_042]$ ps aux | grep pts/0
2yrgr2  3380  0.0  0.0 108332  1856 pts/0    Ss+  14:53   0:00 /bin/bash
2yrgr2  15154  0.0  0.0 103240   856 pts/1    S+   16:19   0:00 grep pts/0
[2yrgr2@localhost CSE_2_042]$ ps aux | grep pts/0
2yrgr2  3380  0.0  0.0 108332  1860 pts/0    Ss+  14:53   0:00 /bin/bash
2yrgr2  15190  0.0  0.0 103240   852 pts/1    S+   16:20   0:00 grep pts/0
[2yrgr2@localhost CSE_2_042]$ ps aux | grep pts/0
2yrgr2  3380  0.0  0.0 108332  1860 pts/0    Ss+  14:53   0:00 /bin/bash
2yrgr2  15192  0.0  0.0   3912    140 pts/0     S   16:20   0:00 ./try
2yrgr2  15194  0.0  0.0 103240   856 pts/1    S+   16:20   0:00 grep pts/0
[2yrgr2@localhost CSE_2_042]$
```

2yrgr2 CSE_2_042 2yrgr2@localhost -/C orphan.c (~)

DELL

Applications Places System

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orphan.c zombie.c

```
1 #include<stdio.h>
2 #include<sys/types.h>
3 #include<sys/wait.h>
4 #include<stdlib.h>
5 #include<unistd.h>
6 void main()
7 {
8     pid_t pid;
9     printf("parent(%d):prgrm just started\n",getpid());
10    if((pid=fork())==0)
11    {
12        printf("child(%d):my parent = %d\n",getpid(),getppid());
13        exit(0);
14    }
15    while(1)
16    {
17        sleep(1);
18    }
19 }
```



Applications Places System



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2yrgr2@localhost:~/CSE_2_042

[2yrgr2@localhost CSE_2_042]\$ gcc zombie.c -o try
[2yrgr2@localhost CSE_2_042]\$ ps

PID	TTY	TIME	CMD
15270	pts/0	00:00:00	bash
15335	pts/0	00:00:00	ps

[2yrgr2@localhost CSE_2_042]\$./try
parent(15336):prgrm just started
child(15337):my parent = 15336

2yrgr2@localhost:~/CSE_2_042

```
[2yrgr2@localhost CSE_2_042]$ ps aux|grep pts/0
2yrgr2  15270  0.0  0.0 108332  1852 pts/0    Ss   16:28
2yrgr2  15336  0.0  0.0    3916   420 pts/0    S+   16:28
2yrgr2  15337  0.0  0.0      0     0 pts/0    Z+   16:28
2yrgr2  15340  0.0  0.0 103240   852 pts/1    S+   16:28
[2yrgr2@localhost CSE_2_042]$ █
```

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process56.c X

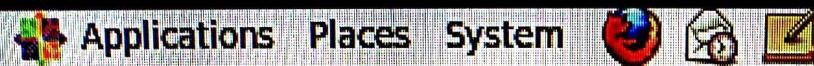
```
1 #include<stdio.h>
2 #include<sys/types.h>
3 #include<sys/wait.h>
4 #include<stdlib.h>
5 #include<unistd.h>
6 int g=10;
7 void main()
8 {
9     pid_t pid,int l=11;
10    if((pid=vfork())==0)
11    {
12        g++;l++;
13        printf("child(%d),global=%d,local=%d\n",getpid(),g,l);
14        exit(0);
15    }
16    else if(pid>0)
17    {
18        wait(NULL);
19        g++;l++;
20        printf("parent(%d),global=%d,local=%d\n",getppid(),g,l);
21        exit(0);
22    }
23    else
24        printf("error\n");
25 }
```

process56.c (~/CSE_2_042) - gedit

CSE_2_042 2yrgr2@localhost:~/C...

process56.c (~/CSE_2...

DELL



2yrgr2

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2yrgr2@localhost:~/CSE_2_042

```
[2yrgr2@localhost CSE_2_042]$ gcc process56.c -o try
[2yrgr2@localhost CSE_2_042]$ ./try
child(2175),global=11,local=12
parent(15270),global=12,local=13
[2yrgr2@localhost CSE_2_042]$ █
```

2yrgr2@localhost:~/CSE_2_042

CSE_2_042

2yrgr2@localhost:~/C...

process56.c (~/CSE_2_...