

- 1) Write a C/C++ prog which demonstrate inter process communications b/w a Reader Process and a Write Process use mkfifo, open, read, write and close APIs in your Prog.

```
#include <sys/types.h>
#include <sys/stat.h>
#include <string.h>
#include <stdio.h>
#include <unistd.h>

int main ( int argc, char *argv[])
{
    char buff[160];
    int fd, n;
    mkfifo (argv[1], S_FIF0 | 0777);
    if (argc == 3)
    {
        fd = open (argv[1], O_WRONLY);
        write (fd, argv[2], strlen(argv[2]));
        close fd;
    }
    if (argc == 2)
    {
        fd = open (argv[1], O_RDONLY);
        n = read (fd, buff, size-of buff);
        buff[n] = '\0';
        printf ("%s", buff);
        close(fd);
    }
}
```

Output

cc comm.c

./a.out comm "5b linux lab" &

[1] 3503

./a.out comm

5b linux lab [1] + Done

2) Write a Prog to emulate the unix Ln Command

```
#include <unistd.h>
```

```
#include <stdio.h>
```

```
#include <string.h>
```

```
int main (int argc, char *argv[])
```

```
{
    if (argc == 4)
```

```
    {
        symlink (argv[2], argv[3]);
```

```
        printf ("Symbolic link is created");
```

```
        return 0;
```

```
    }
```

```
    if (argc == 3)
```

```
    {
        link (argv[1], argv[2]);
```

```
        printf ("Hardlink is created");
```

```
        return 0;
```

```
    }
```

```
}
```

Output

cc ln.c

./a.out -s sum.sh slink

Symbolic link is created

./a.out prime.sh hardlink

Hardlink is created

3. ~~#~~ define _POSIX_SOURCE

~~#~~ define _POSIX_C_SOURCE

~~#~~ include <stdio.h>

~~#~~ include <unistd.h>

int main()

if def _POSIX_JOB_CONTROL

cout << " Sys suff Job control, fauler "<<end,

cout << " Sys does not support control \n";

end if

if def _POSIX_SAVED_IDS

cout << " System suff set-UID and saved set

else - GID << cout

cout << " System doesn't support saved set
-UID \n")

end if

if def _POSIX_NO_TRUNC

cout << " System support Path Truncator option
" <<end

else

cout << " Sys doesnot supp Path truncation \n)

end if

if def _POSIX_VISIBLE

cout << " System supports Visible Characters,

for files; " << endif ;

else

cout << " System doesnot supp Visible char

endif

return 0;

3

Output

g++ prog3.cpp
1a out

Sys Support job control feature

Sys Support Sabot set-UID and Saved
set-GID

Sys Support Change ownership feature

Sys Support Path Truncation option

Sys Support Disable character for file

4) Write C prog to the output the content of
it environment list.

```
#include <stdio.h>
```

```
#include <unistd.h>
```

```
int main (int argc, char * argv[])
```

```
{
```

```
    char ** pte;
```

```
    enter char ** environ;
```

```
    for (pte = environ; * pte; pte++)
```

```
        printf ("%s\n", * pte);
```

```
    return 0;
```

```
}
```

Output

Shell = /bin/bash

Session - manager