cp Command

```
#include <stdio.h>
#include <sys/stat.h>
#include <fcntl.h>

int main()
{
  char src[100], dest[100], buf[500];
  int ptr1, ptr2;
  struct stat sb;


  printf("\nEnter the Source File: ");
  scanf("%s",&src);
  printf("\nEnter the Destination File: ");
  scanf("%s",&dest);




  ptr1 = open(src, O_RDONLY);
  ptr2 = open(dest, O_RDWR|O_APPEND,O_CREAT);

  fstat(ptr1, &sb);

  read(ptr1, buf, sb.st_size);
  write(ptr2, buf, sb.st_size);

  printf("\n Successfully Written to File\n");
  return 0;
}
```

Output

```
42813@user:/mnt/42813/oslab/latex/programs/1$ gcc cp.c
42813@user:/mnt/42813/oslab/latex/programs/1$ ./a.out

Enter the Source File: a
Enter the Destination File: b

Successfully Written to File
42813@user:/mnt/42813/oslab/latex/programs/1$ cat a
Contents of File a
42813@user:/mnt/42813/oslab/latex/programs/1$ cat b
Contents of File b
Contents of File a
42813@user:/mnt/42813/oslab/latex/programs/1$
```

ls command

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

int main()
{
  DIR *ptr;
  struct dirent *test;
  struct stat sb;
  char dir[100];
  printf("Path: ");
  scanf("%s", dir);
  printf("%s", dir);

  ptr = opendir(dir);

  while(test = readdir(ptr))
    {
      printf("%s    %d\n", test->d_name, test->d_reclen);
    }

  return 0;
}
```

Output

```
42813@user:/mnt/42813/oslab$ gcc ls.c
42813@user:/mnt/42813/oslab$ ./a.out
Path: scripts
scripts..    24
fact.sh    32
quad.sh    32
arms.sh    32
sum3.sh    32
fib.sh    32
.    24
sum3.sh~    32
42813@user:/mnt/42813/oslab$
```

stat command

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

int main()
{
  struct stat sb;
  char path[100];
  int ptr;
  printf("\nFilename: ");
  scanf("%s",&path);

  ptr = open(path, O_RDONLY);

  fstat(ptr, &sb);

  printf("\n Details of File : %s", path);
  printf("\n Size : %d", sb.st_size);
  printf("\n Block Size : %d", sb.st_blksize);
  printf("\n Access Time : %s", ctime(&sb.st_atime));
  printf("\n Modification Time : %s", ctime(&sb.st_mtime));
  printf("\n Status Changed Time : %s", ctime(&sb.st_ctime));

  return 0;
}
```

Output

```
42813@user:/mnt/42813/oslab$ gcc stat.c
42813@user:/mnt/42813/oslab$ ./a.out

Filename: sjf.c

 Details of File : sjf.c
 Size : 2338
 Block Size : 1048576
 Access Time : Sat Feb 20 01:32:09 2016

 Modification Time : Sat Feb 20 01:32:09 2016

 Status Changed Time : Wed Mar 23 03:24:47 2016
42813@user:/mnt/42813/oslab$
```

fork

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

void main()
{
  int temp;
  temp = fork();
  if(temp==0)
    {
      printf("\t I am child");
      printf("\t Child's Parent ID: %d",getppid());
      printf("\t Child Own ID: %d",getpid());
    }
  else
    {
      printf("\t I am Parent");
      printf("\t Parent's ID: %d",getpid());
      printf("\t Parent's Child ID: %d\n\n",temp);
    }
printf("\n");
}
```

Output

```
42813@user:/mnt/42813/oslab$ ./a.out
I am Parent   Parent's ID: 25351   Parent's Child ID: 25352


I am child    Child's Parent ID: 25351   Child Own ID: 25352
```