EXPERIMENT 3a:

PROGRAM

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

void main()
{
   char file[50];
   struct stat *nfile;
   nfile = (struct stat*)malloc(sizeof(struct stat));

   printf("Enter the file name: ");
   scanf("%s", file);

   stat(file, nfile);

   printf("Last access time: %ld\n", nfile->st_atime);
   printf("Inode number: %lu\n", nfile->st_ino);
   printf("Block size: %ld\n", nfile->st_blksize);
   printf("File mode: %o\n", nfile->st_mode);
   printf("User ID: %u\n", nfile->st_uid);
   printf("Group ID: %u\n", nfile->st_gid);
   free(nfile);
}
```

OUTPUT

```
Enter the file name: stat.c
Last access time: 1740406437
Inode number: 1858031
Block size: 4096
File mode: 100664
User ID: 1000
Group ID: 1000
```

EXPERIMENT 3b:

PROGRAM

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

void main() {
   char path[50];
   DIR *dir;
   struct dirent *directory;

   printf("ENTER THE PATH: ");
   scanf("%s", path);
   dir = opendir(path);
   while ((directory = readdir(dir)) != NULL)
         {
                  printf("Inode: %lu\n", directory->d_ino);
                  printf("Name: %s\n", directory->d_name);
          }
         closedir(dir);
}
```

OUTPUT

```
ENTER THE PATH: /home/shino/Desktop/shino/exp3
Inode: 1857846
Name: a.out
Inode: 1835081
Name: ..
Inode: 1858031
Name: stat.c
Inode: 1857790
Name: dirent.c
Inode: 1844168
Name: demo.c
Inode: 1857990
Name: .
```

EXPERIMENT 3c:

PROGRAM

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

void main() {
   pid_t p;
   p = fork();
   printf("%d", p);
   if (p < 0) {
      printf("ERROR");
      exit(1);
   }
else if (p > 0) {
      wait(NULL);
      printf("Parent process \n");
      printf("Process ID: %d\n", getpid());
      printf("Parent Process ID: %d\n", getppid());
   }
else {
      printf("Child process \n");
      printf("Process ID: %d\n", getpid());
      printf("Parent Process ID: %d\n", getppid());
   }
}
```

OUTPUT

```
0Child process
Process ID: 4725
Parent Process ID: 4724
4725Parent process
Process ID: 4724
Parent Process ID: 3281
```