Exp 1 A

```
#include <stdio.h>
#include <unistd.h>
#include <fcntl.h>
int main()
{
   int fd;
   char buffer[50];
/* open() – create and open a file */
   fd = open("sample.txt", O_CREAT | O_RDWR, 0644);

   if (fd < 0)
   {
      printf("File opening failed\n");
      return 1;
   }
/* write() – write data into file */
   write(fd, "Hello OS Lab", 12);
/* move file pointer to beginning */
   lseek(fd, 0, SEEK_SET);
/* read() – read data from file */
   read(fd, buffer, 12);
/* display data */
   printf("Data read from file: %s\n", buffer);
/* close() – close the file */
   close(fd);
 return 0;
}
```

```
~/ex no 1$ gcc -o 1a lab1a.c
~/ex no 1$ ./1a
Data read from file: Hello OS Lab
~/ex no 1$
```

Exp 1 B

```
#include <stdio.h>
#include <dirent.h>
 int main()
{
   DIR *d;
   struct dirent *entry;
  /* open current directory */
   d = opendir(".");
   if (d == NULL)
   {
      printf("Directory cannot be opened\n");
      return 1;
   }
   /* read directory entries */
   printf("Directory contents:\n");
   while ((entry = readdir(d)) != NULL)
   {
      printf("%s\n", entry->d_name);
   }
   /* close directory */
   closedir(d);
   return 0;
}
```

```
~/ex no 1$ ./1b
Directory contents:
.
..
1b
exp.term
exp4.c
1a
exp1_c.c
lab1b.c
2026-02-10-file-1.term
sample.txt
exp3.c
lab1a.c
```

Exp 1 C

```
#include<stdio.h>
#include<unistd.h>
#include<sys/types.h>
void main(){
 printf("Before declaring FORK.");
 printf("The value of PID is : ");
 printf("%d",getpid());
 printf("The value of PPID is : ");
 printf("%d",getppid());

 pid_t pid=fork();//Used to create child process
 if(pid==0)//Child Process
 {
 printf("After declaring FORK.");
 printf("The value of PID is zero.");
 printf("The value of PID is : ");
 printf("%d",getpid());
 printf("The value of PPID is : ");
 printf("%d",getppid());
 }
 else if(pid>0)//Parent Process
 {
 printf("After declaring FORK.");
 printf("The value of PID is greater than zero.");
 printf("The value of PID is : ");
 printf("%d",getpid());
```

```
printf("The value of PPID is : ");
printf("%d",getppid());
}
else//Error
{
printf("After declaring FORK.");
printf("The value of PID is less than zero.");
printf("The value of PID is : ");
printf("%d",getpid());
printf("The value of PPID is : ");
printf("%d",getppid());
}
}
```

```
~/ex no 1$ gcc -o 1c exp1_c.c
~/ex no 1$ ./ 1c
bash: ./: Is a directory
~/ex no 1$ ./1c
Before declaring FORK.The value of PID is : 702The value of PPID is : 502After declaring FORK.The value of PID is greater than zero.The value of PID is : 702The value of PPID is : 502Before declaring
FORK.The value of PID is : 702The value of PPID is : 502After declaring FORK.The value of PID is zero.The value of PID is : 703The value of PPID is : 702~/ex no 1$
```