**ROLL NO.: 19l-1316**

**EXPERIMENT 8**

**Named Pipes**

**FIFO1:**

// C program to implement one side of FIFO

// This side writes first, then reads

#include <stdio.h>

#include <string.h>

#include <fcntl.h>

#include <sys/stat.h>

#include <sys/types.h>

#include <unistd.h>

int main()

{

int fd;

// FIFO file path

char \* myfifo = "/tmp/myfifo";

// Creating the named file(FIFO)

// mkfifo(<pathname>, <permission>)

mkfifo(myfifo, 0666);

char arr1[80], arr2[80];

// Open FIFO for write only

fd = open(myfifo, O\_WRONLY);

// Take an input arr2ing from user.

// 80 is maximum length

fgets(arr1,80, stdin);

// Write the input arr2ing on FIFO

// and close it

//write(fd, arr2, strlen(arr2)+1);

write(fd, arr1, strlen(arr1)+1);

close(fd);

// Open FIFO for Read only

fd = open(myfifo, O\_RDONLY);

// Read from FIFO

read(fd, arr1, sizeof(arr1));

// Print the read message

printf("Server : %s \n", arr1);

close(fd);

return 0;

}

**FIFO2:**

// C program to implement one side of FIFO

// This side reads first, then reads

#include <stdio.h>

#include <string.h>

#include <fcntl.h>

#include <sys/stat.h>

#include <sys/types.h>

#include <unistd.h>

int main()

{

int fd1;

// FIFO file path

char \* myfifo = "/tmp/myfifo";

// Creating the named file(FIFO)

// mkfifo(<pathname>,<permission>)

mkfifo(myfifo, 0666);

char opp;

int a,b;

char str1[80], str2[10];

while (1)

{

// First open in read only and read

fd1 = open(myfifo,O\_RDONLY);

read(fd1, str1, 80);

// Print the read string and close

printf("client : %s", str1);

int init\_size = strlen(str1);

char delim[] = " ";

char \*ptr = strtok(str1, delim);

int z=0;

if(\*ptr == '+')z=1;

else if(\*ptr == '-')z=2;

else if(\*ptr == '\*')z=3;

else if(\*ptr == '/')z=4;

ptr = strtok(NULL, delim);a=atoi(ptr);

ptr = strtok(NULL, delim);b=atoi(ptr);

int ret=0;

if(z==1)ret=a+b;

else if(z==2)ret=a-b;

else if(z==3)ret=a\*b;

else if(z==4)ret=a/b;

sprintf(str2, "%d", ret);

close(fd1);

// Now open in write mode and write

// string taken from user.

fd1 = open(myfifo,O\_WRONLY);

//fgets(str2, 80, stdin);

write(fd1, str2, strlen(str2)+1);

close(fd1);

}

return 0;

}

