**ASSIGNMENT NO. 7 (b)//no relation**

**INTER PROCESS COMMUNICATION USING FIFO**

**PROCESS 1:**

#include<unistd.h>

#include<sys/types.h>

#include<stdio.h>

#include<fcntl.h>

#include<string.h>

#define pipe1 "pipe1"//no space

#define pipe2 "pipe2"

int main()

{

char str[100]="\0", str1[100]="\0";

int i=0, fd;

printf("Enter Data:\n");

str[i]=getchar();

while(str[i]!='#')

{

i++;

str[i]=getchar();

}

str[strlen(str)-1]= '\0';

printf("\nData entered successfully!!\n\nData in File: %s", str);

printf("\nTransferring Data..\n");

mkfifo(pipe1, 0666);

fd=open(pipe1,O\_WRONLY);

write(fd, str, sizeof(str));

close(fd);

printf("\nData Transferred\n");

printf("\nReceiving Data..\n");

fd=open(pipe2, O\_RDONLY);//same fd in transefering and recieving

read(fd, str1 , sizeof(str1));

close(fd);

printf("\nData Received!!\n");

printf("Data of File: %s", str1);

return 0;

}

**PROCESS 2:**

#include<unistd.h>

#include<sys/types.h>

#include<stdio.h>

#include<string.h>

#include<fcntl.h>

#define pipe1 "pipe1"

#define pipe2 "pipe2"

int main()

{

char str[100]="\0", fName[20], ch[100]="\0";

int fd, i, wordCount=0, lineCount=0, charCount=0;

FILE \*fp;

printf("\nReceiving Data..");

fd=open(pipe1, O\_RDONLY);

read(fd, str, sizeof(str));

close(fd);

printf("\nData Received: \n%s", str);

printf("\nCounting Character, Words and Lines..\n");

for(i=0;i<strlen(str); i++)

{

if(str[i]==' ' || str[i]=='\n')

wordCount++;

if(str[i]=='\n')

lineCount++;

if(str[i]!='\n' && str[i]!=' ')

charCount++;

}

printf("\nEnter the File Name(with extension): ");

scanf("%s", fName);

//printf("\nNumber of:\nCharacters: %d\nWords: %d\nLines: %d\n",charCount, wordCount, lineCount);

printf("\nWriting Data to File..\n");

fp=fopen(fName, "w");

fprintf(fp,"Charater Count: %d\nWord Count: %d\nLine Count: %d\n", charCount, wordCount,lineCount);

fclose(fp);

printf("\nRetrieving Data From File..\n");

fp=fopen(fName, "r");

i=0;

ch[0]=fgetc(fp);

while(!feof(fp))

{

i++;

ch[i]=fgetc(fp);

}

//ch[i]='\0';

ch[strlen(ch)-1]= '\0';

fclose(fp);

//printf("Retrieved Data: %s", ch);

printf("\nTransferring Data..\n");

mkfifo(pipe2, 0666);

fd=open(pipe2, O\_WRONLY);

write(fd, ch, sizeof(ch));

close(fd);

printf("\nData Transferred!!\n");

return 0;

}

**OUTPUT**

**TERMINAL 1:**

[it@localhost ~]$ gcc NamedPipe1.c

[it@localhost ~]$ ./a.out

Enter Data:

this program is for interprocess communication..

Named pipe for independent processes..

#

Data entered successfully!!

Data in File: this program is for interprocess communication..

Named pipe for independent processes..

Transferring Data..

Data Transferred

Receiving Data..

Data Received!!

Data of File: Charater Count: 77

Word Count: 11

Line Count: 2

[it@localhost ~]$

**TERMINAL 2:**

[it@localhost ~]$ gcc NamedPipe2.c

[it@localhost ~]$ ./a.out

Receiving Data..

Data Received:

this program is for interprocess communication..

Named pipe for independent processes..

Counting Character, Words and Lines..

Enter the File Name(with extension): a.txt

Writing Data to File..

Retrieving Data From File..

Transferring Data..

Data Transferred!!

[it@localhost ~]$