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

int main(void)
{
    int fd1[2], nbytes=1,fd2[2],a=0;
    pid_t pid;
    char string[80];
    char readbuffer[80];
    char ch='a',ch1='\n';
    FILE *fp;

    pipe(fd1);//PIPE CREATED
    pipe(fd2);//PIPE CREATED

    /*Error in fork*/
    if((pid = fork()) == -1)
    {
        perror("fork");
        exit(1);
    }

    //Child Process
    if(pid == 0)
    {
        close(fd1[1]);          /*closing write end of Pipe 1*/
        read(fd1[0], readbuffer, sizeof(readbuffer)); /*reading filename through Pipe 1*/
        printf("\nFilename '%s' is being read by Child Process through Pipe 1...\n",readbuffer);
        fp=fopen(readbuffer,"r");
        close(fd1[0]);          /*closing read end of Pipe 1*/
        close(fd2[0]);          /*closing read end of Pipe 2*/
        printf("\nContents of %s are being sent to Parent Process through Pipe 2...\n",readbuffer);
        while(a!=-1)
        {
            a=fscanf(fp,"%c",&ch);
            write(fd2[1], &ch, sizeof(ch)); /*writing contents of file on Pipe 2*/
        }
        close(fd2[1]); /*closing write end of Pipe 2*/
        exit(0);
    }
    //Parent process
    else
    {
        close(fd1[0]); /*closing read end of Pipe 1*/
        printf("IN PARENT PROCESS\n");
        printf("\nEnter name of file:");
    }
}

```

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scanf("%s",string);
printf("Filename is being sent by Parent Process to Child Process through Pipe 1...\n");

write(fd1[1], string, (strlen(string)+1)); /*writing filename on Pipe 1*/
wait();
close(fd1[1]); /*closing write end of Pipe 1*/
close(fd2[1]); /*closing write end of Pipe 2*/

printf("\nContents of %s are being received by Parent Process through Pipe 2...\n\n",string);

printf("IN PARENT PROCESS\n");
printf("\nReceived Message:\n");

while(nbytes!=0)
{
    printf("%c",ch1);
    nbytes = read(fd2[0], &ch1, sizeof(ch1)); /*reading contents of file from
Pipe 2*/
}
close(fd2[0]); /*closing read end of Pipe 2*/
}
return(0);
}

```

```

kalikali@pavan: /mnt/2ADC0CA1DC0C6A01/TEIT/OS/LAB
File  Actions  Edit  View  Help
kalikali@pavan:/mnt/2ADC0CA1DC0C6A01/TEIT/OS/LAB$ ./a.out
IN PARENT PROCESS

Enter name of file:pavan
Filename is being sent by Parent Process to Child Process through Pipe
1 ...

Filename 'pavan' is being read by Child Process through Pipe 1 ...

Contents of pavan are being sent to Parent Process through Pipe 2 ...
Contents of pavan are being received by Parent Process through Pipe 2.
..

IN PARENT PROCESS

Received Message:

kalikali@pavan:/mnt/2ADC0CA1DC0C6A01/TEIT/OS/LAB$ 

```