Process P1

```
#include<stdio.h>
#include<stdlib.h>
#include<errno.h>
#include<string.h>
#include<fcntl.h>
#include<sys/types.h>
#include<sys/stat.h>
#include<unistd.h>

#define FIFO_NAME1 "comm_pipe1"
#define FIFO_NAME2 "comm_pipe2"

int main(){
        char s1[300],s2[300];
        int num, fd1,fd2,byt;
                //printf("producer");
        mknod(FIFO_NAME1, S_IFIFO | 0660,0);
        mknod(FIFO_NAME2, S_IFIFO | 0660,0);
        printf("waitng for consumer...\n");
        fd1= open(FIFO_NAME1, O_WRONLY);
        fd2= open(FIFO_NAME2, O_RDONLY);
        printf("fot a consumer--type some stuff\n");
        gets(s1);
        if((num==write(fd1,s1,strlen(s1)))==-1)
                perror("write");
        else{
                printf("Speak: wrote %d bytes to file1\n",num);
                byt=read(fd2,s2,300);
                s2[byt]='\0';
                printf(" %s\n",s2);
        }
        close(fd1);
        close(fd2);
        return 0;
}
```

Process C1

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

```
#include<errno.h>
#include<fcntl.h>
#include<sys/stat.h>
#include<string.h>

#define FIFO_NAME1 "comm_pipe1"
#define FIFO_NAME2 "comm_pipe2"

int main(){
        char s[300],vowel[20],send[200];
        int num, fd1, fd2, sig,k=0,i,wordcnt=1,charcnt=0,linecnt=0;
        FILE *fp;
        fp=fopen("file.txt","w");
        mknod(FIFO_NAME1, S_IFIFO | 0666, 0);
        mknod(FIFO_NAME2, S_IFIFO | 0666, 0);
        printf("waiting for producers...\n");
        fd1=open(FIFO_NAME1, O_RDONLY);
        fd2=open(FIFO_NAME2, O_WRONLY);
        printf("got a producer\n");
        if((num=read(fd1,s,300))==-1)
                perror("read");
        else{
                s[num]='\0';
                printf("Tick: read %d bytes : \"%s\" \n",num,s);
                k=0;
                vowel[0]='\0';
                wordcnt=1;
                for(i=0;i<num;i++){

if(s[i]=='a'||s[i]=='e'||s[i]=='i'||s[i]=='o'||s[i]=='u'||s[i]=='A'||s[i]=='E'||s[i]=='I'||s[i]=='O'||s[i]=='U'){
                                        vowel[k]=s[i];
                                        k++;
                                }
                                if(s[i]==' ' && s[i+1]!=' ')
                                        wordcnt++;
                                if(s[i]=='.' && (s[i+1]==' ' || s[i+1]=='\0'))
                                        linecnt++;
                                else if(s[i]!='.' && s[i]!=' ')
                                        charcnt++;

                }
                vowel[k]='\0';
                sprintf(send,"for the given sentence the word count is %d\nvowel count is
%d\ncharacter count is %d\nLines are %d\n",wordcnt,k,charcnt,linecnt);
                fprintf(fp,"%s",send);
```

```
                //strcat(send,vowel);
                if((sig=write(fd2,send,strlen(send)))!=-1)
                        printf("\nwritten successfully to file 2");
                else
                        printf("\nerror in writing to file 2");
        }
                close(fd1);
                close(fd2);
                fclose(fp);
                return 0;
}
```

OUTPUT -

cc c1.c

waiting for producers…
got a producer
Tick : read a 30 bytes : “This is OSL. This is in PCCOE.”
written successfully to file2

cc p1.c

waiting for consumer…
fot a consumer–type some stuff
This is OSL.This is in PCCOE.
Speak: Wrote 0 bytes to file1
for given sentence word count is 7
vowel count is 8
character count is 22
Lines are 2

cat file.txt

for given sentence word count is 7
vowel count is 8
character count is 22
Lines are 2