

## Assignment 4-A

code:

```
#include<stdio.h>
#include<stdlib.h>
#include<pthread.h>

void *Consume();
void *Produce();
int wrc,rdc;

pthread_mutex_t mute = PTHREAD_MUTEX_INITIALIZER;

// END OF FUNCTION PROTOTYPING

int main()          // definition of Main function
{
    pthread_t thrd1,thrd2;

    pthread_cond_t condition = PTHREAD_COND_INITIALIZER;

    int ret1,ret2;
    int ch,count;
    char che;

    do
    {

        printf("\n\n -----Deside Initial Priority ----- ");
        printf("\n\n1: CONSUMER ");
        printf("\n\n2: PRODUCER ");
        printf("\n\n3: EXIT ");
        printf("\n\t Enter Ur Choice ");
        scanf("%d",&ch);

        switch(ch)
        {
            case 1:
                printf("\n\n ENTER COUNT FOR PRODUCER AND CONSUMER...");
                scanf("%d%d",&wrc,&rdc);
                if(rdc==1)
                {

                    ret1=pthread_create(&thrd1,NULL,&Consume,NULL);

                    ret2=pthread_create(&thrd2,NULL,&Produce,NULL);
```

```

    pthread_join(thrd1,NULL);
    pthread_join(thrd2,NULL);
}
else
{
    printf("\n\n Only One Consumer Is Allowed .. Try Again");
}

    break;

```

case 2:

```

    printf("\n\n ENTER COUNT FOR PRODUCER AND CONSUMER...");
    scanf("%d%d",&wrc,&rdc);
    if(rdc == 1 || rdc == 0)
    {

```

```

        ret1=pthread_create(&thrd1,NULL,&Produce,NULL);

```

```

        ret2=pthread_create(&thrd2,NULL,&Consume,NULL);

```

```

    pthread_join(thrd1,NULL);
    pthread_join(thrd2,NULL);
}
else
{
    printf("\n\n Only One Consumer Is Allowed .. Try Again");
}
    break;

```

case 3:

```

    exit(0);    // Exit from loop
    break;

```

default:

```

    printf("\n\n Invalid Choice Selection.. Try Again..... ");

```

```

}
printf("\n\n Do U Wish To Continue [y/n] ");
scanf("%s",&che);

```

```

}while(che=='y' || che=='Y'); // loop till user's wish..

```

```

return 0;
}

```

// END OF MAIN FUNCTION

void \*Consume()

```

{
    FILE *fp;
    char txt;
    char str[15];
    int i;
    if(rdc != 0)
    {
        pthread_mutex_lock(&mute);

        printf("\n\n Give Name Which U Wish To Cosume ");
        scanf("%s",&str);    // reading file name to b read

        fp=fopen(str,"r");    // opening file in read mode

        printf("\n\n Contents Of Requested File Are...\n");

        while(!feof(fp))    // reading file till end of file
        {
            txt=fgetc(fp);
            printf("%c",txt);    // printing contents of file
        }

        fclose(fp);    // closing previously opened file
        pthread_mutex_unlock(&mute);
    }
}

// END OF CONSUME FUNCTION

void *Produce()
{
    FILE *fs;    // declaring file pointer
    char str[15];
    char text;
    int i;

    for(i=1;i<=wrc;i++)
    {

        pthread_mutex_lock(&mute);

        printf("\n\n Give %d. File Name In Which U Wish To Produce ..",i);
        scanf("%s",&str);    // reading file name to b written

        fs=fopen(str,"a");    // opening file in append mode in order to write contents in the file

        printf("\n\n Inorder To Stop Writting Press Q ");    // press Q to stop writting into the file
    }
}

```

```
printf("\n\n Enter The Text ");
do
{
    scanf("%c",&text); // reading data from keyboard

    if(text!='Q')
        fputc(text,fs); // putting data into the desired file

}while(text!='Q'); // end of do-while loop

fclose(fs); // closing previously opened file

pthread_mutex_unlock(&mute);
}
}
```

## Output:

```
ak-linux-computer@fedora-ak:~  
[ak-linux-computer@ak ~]$ gcc 4a.c -o 4a  
[ak-linux-computer@ak ~]$ ./4a  
  
-----Deside Initial Priority -----  
  
1: CONSUMER  
2: PRODUCER  
3: EXIT  
    Enter Ur Choice 2  
  
ENTER COUNT FOR PRODUCER AND CONSUMER...1 1  
  
Give 1. File Name In Which U Wish To Produce ..ak  
  
Inorder To Stop Writting Press Q  
  
Enter The Text this is assignment 4  
part a  
in progress  
Q  
  
Give Name Which U Wish To Cosume ak  
  
Contents Of Requested File Are...  
this is assignment 4  
part a  
in progress  
◆  
this is assignment 4  
part a  
in progress  
◆  
Do U Wish To Continue [y/n] y  
  
-----Deside Initial Priority -----  
  
1: CONSUMER  
2: PRODUCER  
3: EXIT  
    Enter Ur Choice 2  
  
ENTER COUNT FOR PRODUCER AND CONSUMER...ok  
  
Give 1. File Name In Which U Wish To Produce ..  
  
Inorder To Stop Writting Press Q  
  
Enter The Text akash kamat  
Q  
  
Give Name Which U Wish To Cosume ok  
  
Contents Of Requested File Are...  
akash kamat  
◆  
Do U Wish To Continue [y/n] n  
[ak-linux-computer@ak ~]$
```

exit:

```
-----Deside Initial Priority -----  
1: CONSUMER  
2: PRODUCER  
3: EXIT  
Enter Ur Choice 3  
[ak-linux-computer@ak ~]$
```