

LAB 5

Q1)

```
//producer.c
#include <stdio.h>
#include <string.h>
#include <fcntl.h>
#include <sys/stat.h>
#include <sys/types.h>
#include <unistd.h>

int main()
{
    // creation of the pipe
    char *my_fifo="/tmp/my_fifo";
    mkfifo(my_fifo,0777);

    // declarations
    int i=0,fd;
    char arr[80];

    while(i<4)
    {
        // we open the pipe and write to it
        fd=open(my_fifo,O_WRONLY);
        printf("Enter the integer:\n");
        fgets(arr, 80, stdin);
        write(fd,arr,strlen(arr)+1);
        close(fd);
        i++;
    }
}
```

```
//consumer.c
#include <stdio.h>
#include <string.h>
#include <fcntl.h>
#include <sys/stat.h>
#include <sys/types.h>
#include <unistd.h>

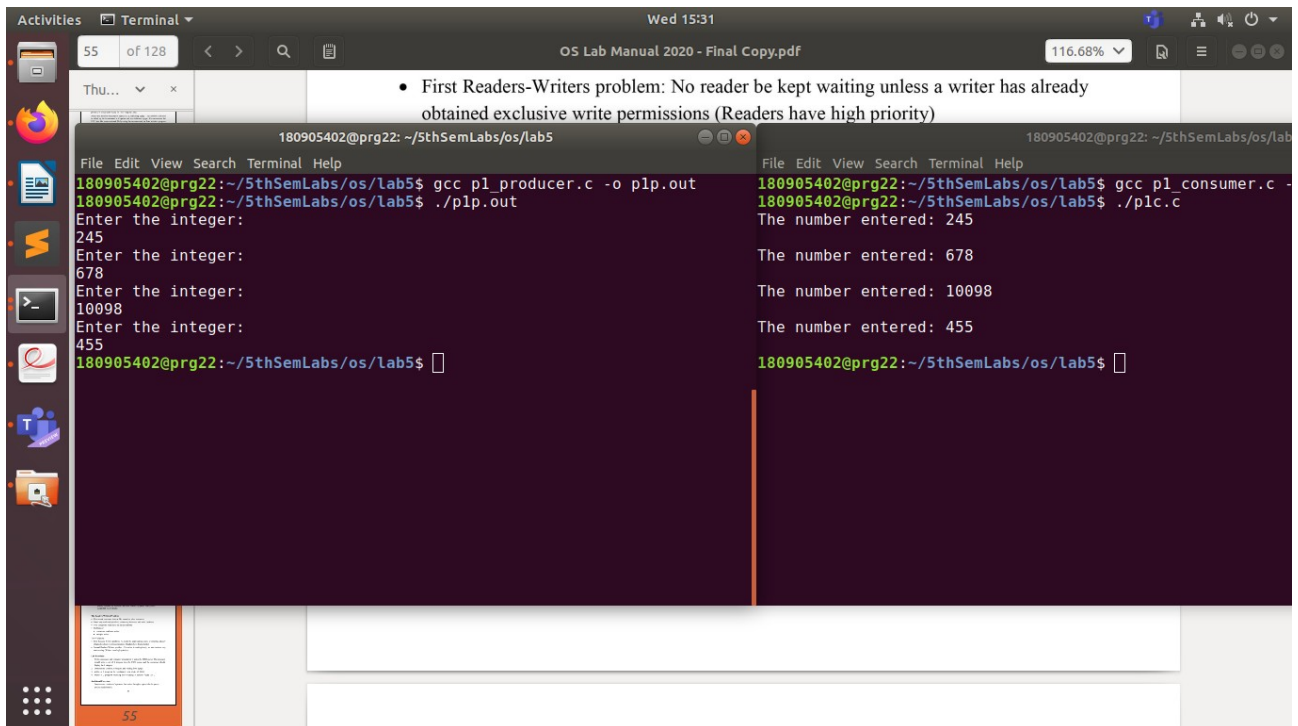
int main()
{
    //creation of pipe
    char *my_fifo="/tmp/my_fifo";
    mkfifo(my_fifo,0777);

    //various declarations
    int i=0,fd;
    char str[80];
```

```

while(i<4)
{
    //we only read from the pipe
    fd=open(my_fifo,O_RDONLY);
    read(fd, str, 80);
    close(fd);
    printf("The number entered: %s\n", str);
    i++;
}
}

```



Q2)

```

#include<stdio.h>
#include<stdlib.h>
#include<string.h>

int main()
{
    int n;
    int fd[2];
    char buff[1025];
    char* msg = "welcome to manipal";

    // rerturn 2 file descriptors
    // fd[0] open for reading
    // fd[1] open for writing
    // creation of a pipe
    pipe(fd);

```

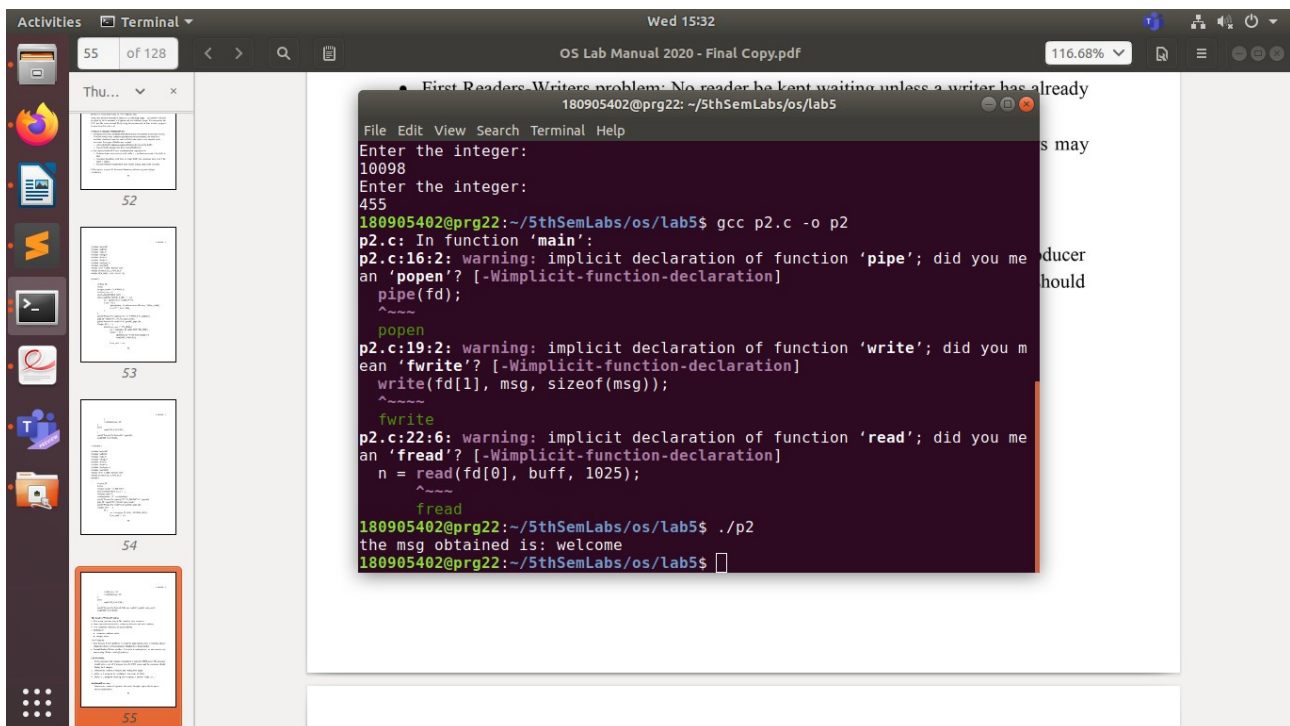
```

//write the data to the pipe
write(fd[1], msg, sizeof(msg));

// read the data from the pipe
n = read(fd[0], buff, 1025);

if(n >= 0)
{
    buff[n] = 0;
    printf("the msg obtained is: %s \n", buff);
}
else
{
    perror("reading error");
}
}

```



Q3)

```

//p3_1.c
#include <stdio.h>
#include <string.h>
#include <fcntl.h>
#include <sys/stat.h>
#include <sys/types.h>
#include <unistd.h>

```

```

int main()
{

    //create a pipe
    int fd;

```

```

char * my_fifo = "/tmp/my_fifo";
mkfifo(my_fifo, 0777);

//arrays to store the message
char arr1[80], arr2[80];

while (1)
{
    //write a message to the pipe
    fd = open(my_fifo, O_WRONLY);
    printf("Enter The message\n");
    scanf("%s", arr2);
    write(fd, arr2, strlen(arr2)+1);
    close(fd);

    //read a message from the pipe
    fd = open(my_fifo, O_RDONLY);
    read(fd, arr1, sizeof(arr1));
    printf("FIFO 2: %s\n", arr1);
    close(fd);
}
return 0;
}

```

```

//p3_2.c
#include <stdio.h>
#include <string.h>
#include <fcntl.h>
#include <sys/stat.h>
#include <sys/types.h>
#include <unistd.h>
int main()
{
    //create a pipe
    int fd1;
    char * my_fifo = "/tmp/my_fifo";
    mkfifo(my_fifo, 0777);

    //array to store the messages
    char arr1[80], arr2[80];
    while (1)
    {
        // first we read from the pipe
        fd1 = open(my_fifo,O_RDONLY);
        read(fd1, arr1, 80);
        printf("FIFO 1: %s\n", arr1);
        close(fd1);

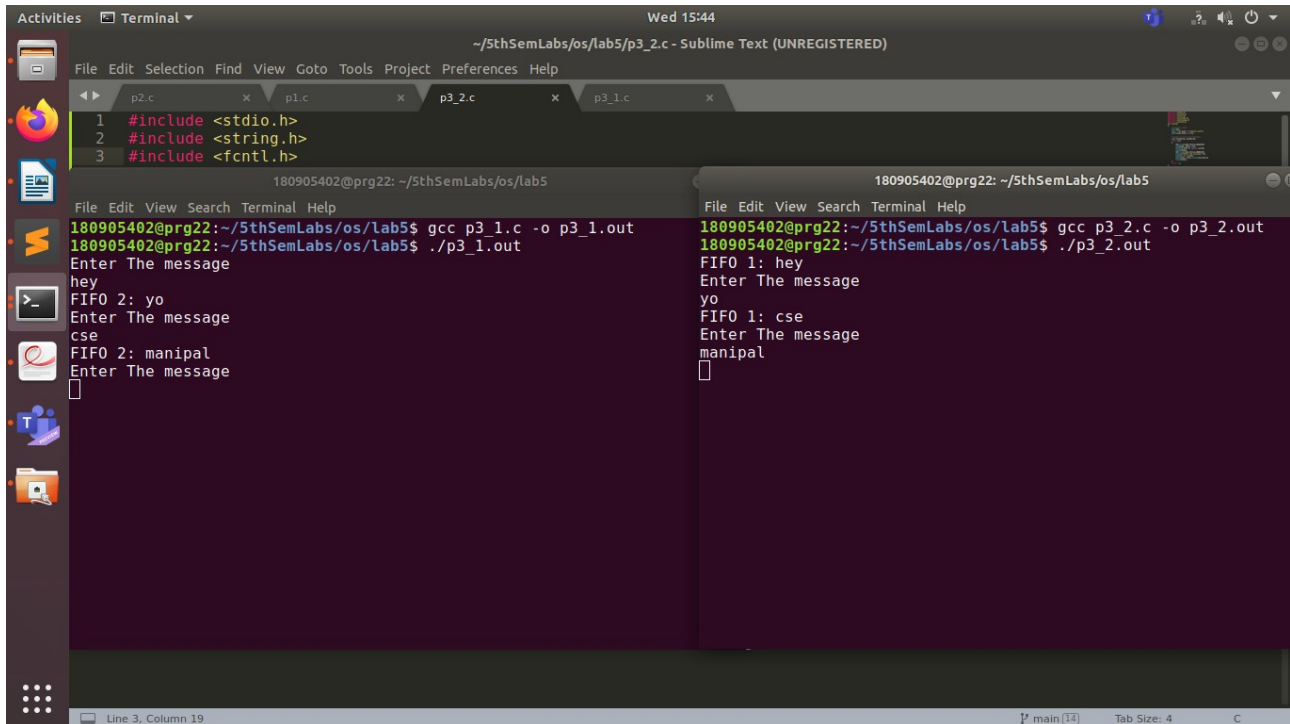
        // then we write to the pipe
        fd1 = open(my_fifo,O_WRONLY);
        printf("Enter The message\n");
    }
}

```

```

scanf("%s", arr2);
write(fd1, arr2, strlen(arr2)+1);
close(fd1);
}
return 0;
}

```



Q4)

```

#include<stdio.h>
#include<stdlib.h>
#include<string.h>

```

```

int main()
{
    FILE *fp1, *fp2;

    //choose file to read from
    fp1 = fopen("sample.txt", "rb");

    //choose/create a file to write to
    fp2 = fopen("output.txt", "wb+");

    char ch;
    while((ch = fgetc(fp1)) != EOF)
    {
        fputc(ch, fp2);
    }
    printf("successfully executed \n");

    close(fp1);
    close(fp2);
}

```

}

