

WEEK -6

1. **Problem Statement:** Write a C for the implementation of FIFO.

// The code for writing in the file myfifo.

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

```
#include <string.h>
```

```
#include <sys/stat.h>
```

```
#include <fcntl.h>
```

```
int main() {
```

```
    int fd , numberOfBytes ;
```

```
    char str[100];
```

```
    mknod("myfifo" , S_IFIFO| 0666 , 0);
```

```
    fd = open("myfifo" , O_WRONLY);
```

```
    printf ("Writing in the fifo : \n");
```

```
    while (fgets(str, sizeof(str), stdin)){
```

```
        numberOfBytes = fwrite(fd , str , strlen(str));
```

```
        printf ("Writer process writes %d bytes : %s\n" , numberOfBytes , str);
```

```
    }
```

```
    return 0;
```

```
}
```

// The code for reading in the file myfifo.

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

```
#include <string.h>
```

```
#include <unistd.h>
```

```
#include <sys/stat.h>
```

```
#include <fcntl.h>
```

```
int main(){
```

```
    int numberOfBytes , fd ;
```

```
    char arr[100];
```

```
    mknod("myfifo" , S_IFIFO|0666 , 0);
```

```
    int fd = open("myfifo" , O_RDONLY);
```

```
    do{
```

```
        numberOfBytes = read(fd , arr , sizeof(arr));
```

```
        arr[numberOfBytes] = '\0';
```

```
        printf("Reader process reads %d bytes : %s\n" , numberOfBytes , arr);
```

```
    }while (numberOfBytes > 0 );
```

```
    return 0;
```

```
}
```

OUTPUT

- **Writer Terminal**

```
geu@CSITLAB1-18:~$ ./a.out
My name is Saloni.
Writing in the fifo :
Writer process writes 18 bytes : My name is Saloni.
^C
```

- **Reader Terminal**

```
geu@CSITLAB1-18:~$ ./a.out
Reader process reads 18 bytes : My name is Saloni.
^C
```