NAME:-Divyesh Mali
ROLL NO:-27
PROGRAM

```
#include<stdio.h>
#include<stdlib.h> int
mutex=1,full=0,empty=5,x=0;
int main() {
int n; void
producer();
void
consumer(); int
wait(int); int
signal(int);
printf("\n1.PRODUCER\n2.CONSUMER\n3.EXIT\n");
while(1)
{
printf("\nENTER YOUR CHOICE\n");
scanf("%d" ,&n); switch(n) { case 1:
if((mutex==1)&&(empty!=0))producer()
; else printf("BUFFER IS FULL");
break; case 2:
if((mutex==1)&&(full!=0)
) consumer(); else
printf("BUFFER IS EMPTY");
break;
case 3:
exit(0)
;
break;
}
}return 0; }
int wait(int
s) { return(--
s); }
int signal(int s)
{ return(++s); }
void producer() {
mutex=wait(mutex)
;
full=signal(full)
;
empty=wait(empty)
; x++;
printf("\nproducer produces the item%d",x);
mutex=signal(mutex);
}
void consumer()
{
```

```
mutex=wait(mutex);
full=wait(full);
empty=signal(empty);
printf("\n cumsumer consumes item%d",x); x-
-;
mutex=signal(mutex);
}
```

OUTPUT:-

```
pvg-aids-ml@pvgaidsml-HP-ProDesk-400-G4-SFF:~/Desktop/harshada02$
gcc pract_2.c -o pract_2
pvg-aids-ml@pvgaidsml-HP-ProDesk-400-G4-SFF:~/Desktop/harshada02$
./ pract_2

1.PRODUCER
2.CONSUMER
3.EXIT

ENTER Y OUR CHOICE
1

producer produces the item1
ENTER Y OUR CHOICE
2

 consumer consumes item1
ENTER Y OUR CHOICE
3
```