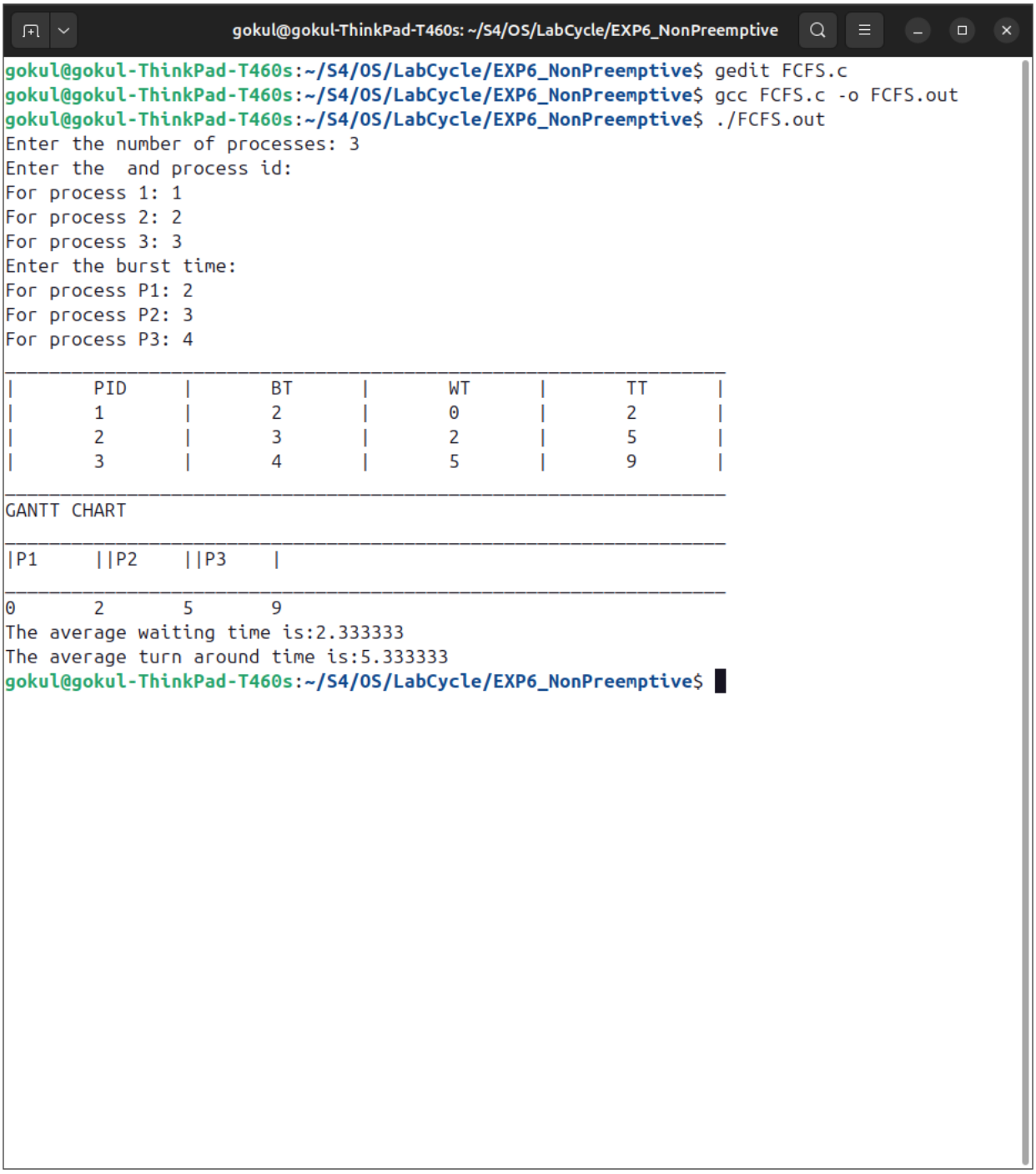
1) First Come First Serve

```
#include<stdio.h>
int main(){
	int p[20],bt[20],wt[20],tt[20],n,i;
	float avg_wt=0.0,avg_tt=0.0;
	printf("Enter the number of processes: ");
	scanf("%d",&n);
	printf("Enter the  and process id:\n");
	for(i=0;i<n;i++){
		printf("For process %d: ",i+1);
		scanf("%d",&p[i]);
	}
	printf("Enter the burst time:\n");
	for(i=0;i<n;i++){
		printf("For process P%d: ",p[i]);
		scanf("%d",&bt[i]);
	}
	wt[0]=0;
	for(i=0;i<n;i++){
		wt[i]=wt[i-1]+bt[i-1];
		avg_wt+=wt[i];
	}
	avg_wt=avg_wt/n;
	for(i=0;i<n;i++){
		tt[i]=wt[i]+bt[i];
		avg_tt+=tt[i];
	}
	avg_tt=avg_tt/n;
	printf("_____________________________________________________________________\
n");
	printf("|\tPID\t|\tBT\t|\tWT\t|\tTT\t|\n");
	for(i=0;i<n;i++){
		printf("|\t%d\t|\t%d\t|\t%d\t|\t%d\t|\n",p[i],bt[i],wt[i],tt[i]);
	}
	printf("_____________________________________________________________________\
n");
	printf("GANTT CHART");
	printf("\n_____________________________________________________________________\
n");
	for(i=0;i<n;i++)
	{
		printf("|P%d\t|",p[i]);
	}
```

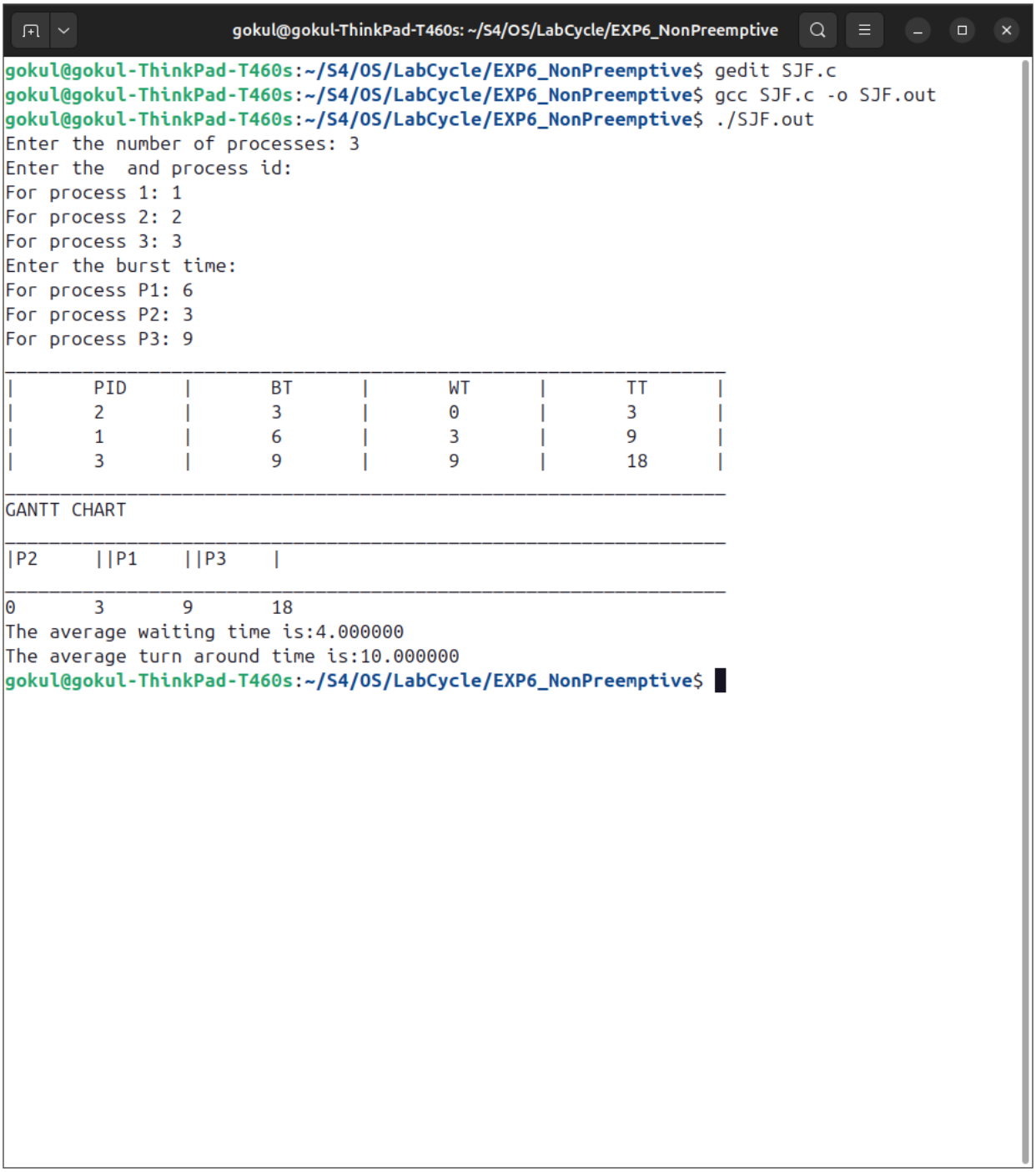
```
printf("\n_____\n");
        printf("%d\t",wt[0]);
        for(i=0;i<n;i++){
                printf("%d\t",tt[i]);
        }
        printf("\nThe average waiting time is:%4f\n",avg_wt);
        printf("The average turn around time is:%4f\n",avg_tt);
}
```



2)Shortest Job First

```
#include<stdio.h>
int main(){
	int p[20],bt[20],wt[20],tt[20],n,i,j,temp;
	float avg_wt=0.0,avg_tt=0.0;
	printf("Enter the number of processes: ");
	scanf("%d",&n);
	printf("Enter the  and process id:\n");
	for(i=0;i<n;i++){
		printf("For process %d: ",i+1);
		scanf("%d",&p[i]);
	}
	printf("Enter the burst time:\n");
	for(i=0;i<n;i++){
		printf("For process P%d: ",p[i]);
		scanf("%d",&bt[i]);
	}
	for(i=0;i<n-1;i++){
		for(j=0;j<n-i-1;j++){
			if(bt[j]>bt[j+1]){
				temp=bt[j];
				bt[j]=bt[j+1];
				bt[j+1]=temp;
				temp=p[j];
				p[j]=p[j+1];
				p[j+1]=temp;
			}
		}
	}
	wt[0]=0;
	for(i=0;i<n;i++){
		wt[i]=wt[i-1]+bt[i-1];
		avg_wt+=wt[i];
	}
	avg_wt=avg_wt/n;
	for(i=0;i<n;i++){
		tt[i]=wt[i]+bt[i];
		avg_tt+=tt[i];
	}
	avg_tt=avg_tt/n;
```

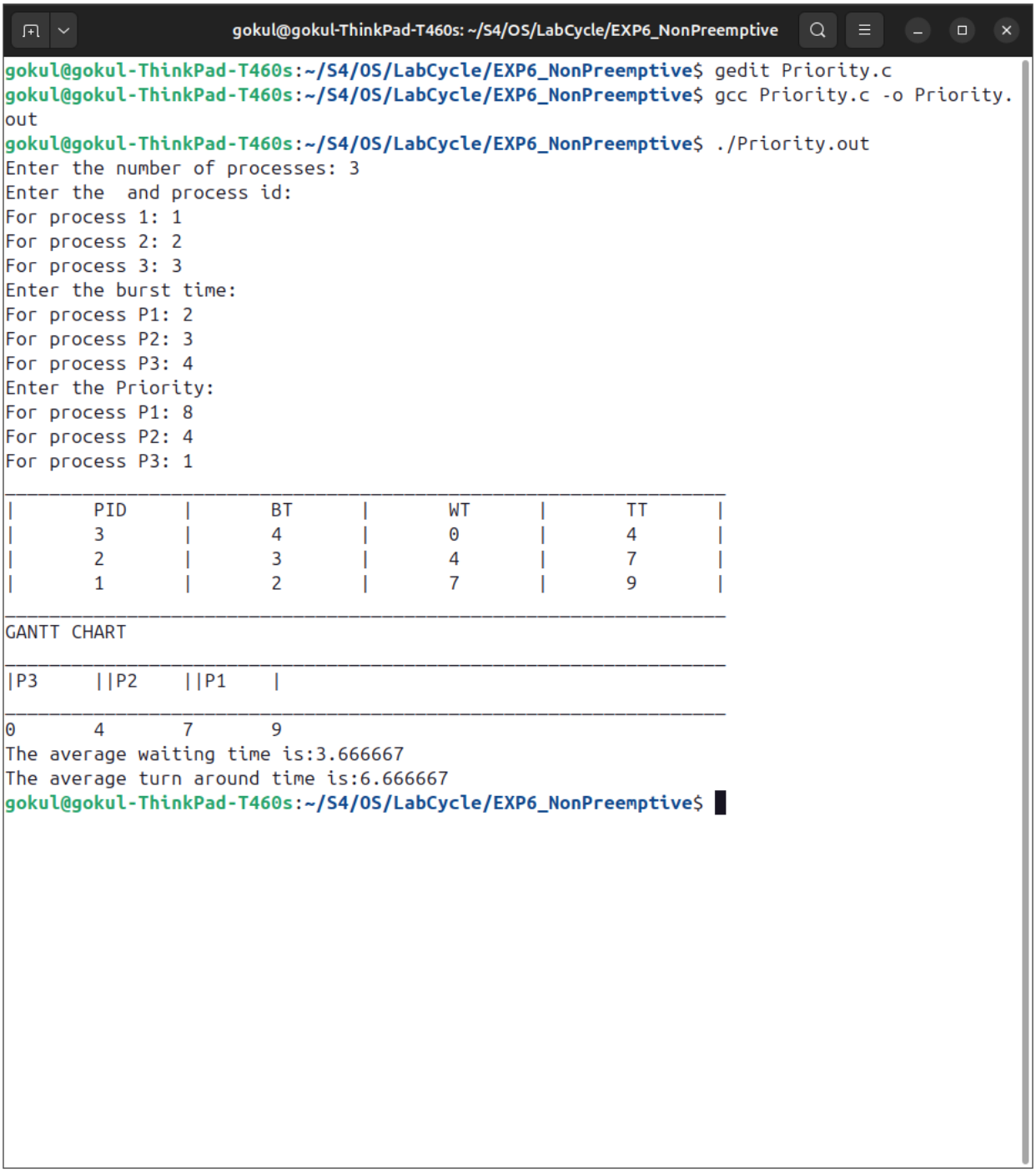
```
printf("_____\n");
        printf("|\tPID\t|\tBT\t|\tWT\t|\tTT\t|\n");
        for(i=0;i<n;i++){
                printf("|\t%d\t|\t%d\t|\t%d\t|\t%d\t|\n",p[i],bt[i],wt[i],tt[i]);
        }
        printf("_____\
n");
        printf("GANTT CHART");
        printf("\n_____\
n");
        for(i=0;i<n;i++)
        {
                printf("|P%d\t|",p[i]);
        }
printf("\n_____\n");
        printf("%d\t",wt[0]);
        for(i=0;i<n;i++){
                printf("%d\t",tt[i]);
        }
        printf("\nThe average waiting time is:%4f\n",avg_wt);
        printf("The average turn around time is:%4f\n",avg_tt);
}
```


gokul@gokul-ThinkPad-T460s: ~/S4/OS/LabCycle/EXP6_NonPreemptive
gokul@gokul-ThinkPad-T460s:~/S4/OS/LabCycle/EXP6_NonPreemptive$ gedit SJF.c
gokul@gokul-ThinkPad-T460s:~/S4/OS/LabCycle/EXP6_NonPreemptive$ gcc SJF.c -o SJF.out
gokul@gokul-ThinkPad-T460s:~/S4/OS/LabCycle/EXP6_NonPreemptive$ ./SJF.out
Enter the number of processes: 3
Enter the and process id:
For process 1: 1
For process 2: 2
For process 3: 3
Enter the burst time:
For process P1: 6
For process P2: 3
For process P3: 9
PID	BT	WT	TT
2	3	0	3
1	6	3	9
3	9	9	18
GANTT CHART
P2		P1		P3
0 3 9 18
The average waiting time is:4.000000
The average turn around time is:10.000000
gokul@gokul-ThinkPad-T460s:~/S4/OS/LabCycle/EXP6_NonPreemptive$

3) Priority

```
#include<stdio.h>
int main(){
	int p[20],bt[20],wt[20],tt[20],n,i,j,temp,pr[20];
	float avg_wt=0.0,avg_tt=0.0;
	printf("Enter the number of processes: ");
	scanf("%d",&n);
	printf("Enter the  and process id:\n");
	for(i=0;i<n;i++){
		printf("For process %d: ",i+1);
		scanf("%d",&p[i]);
	}
	printf("Enter the burst time:\n");
	for(i=0;i<n;i++){
		printf("For process P%d: ",p[i]);
		scanf("%d",&bt[i]);
	}
	printf("Enter the Priority:\n");
	for(i=0;i<n;i++){
		printf("For process P%d: ",p[i]);
		scanf("%d",&pr[i]);
	}
	for(i=0;i<n-1;i++){
		for(j=0;j<n-i-1;j++){
			if(pr[j]>pr[j+1]){
				temp=pr[j];
				pr[j]=pr[j+1];
				pr[j+1]=temp;
				temp=bt[j];
				bt[j]=bt[j+1];
				bt[j+1]=temp;
				temp=p[j];
				p[j]=p[j+1];
				p[j+1]=temp;
			}
		}
	}
	wt[0]=0;
	for(i=1;i<n;i++){
		wt[i]=wt[i-1]+bt[i-1];
		avg_wt+=wt[i];
	}
	avg_wt=avg_wt/n;
```

```
for(i=0;i<n;i++){
		tt[i]=wt[i]+bt[i];
		avg_tt+=tt[i];
	}
	avg_tt=avg_tt/n;
	printf("_____\
n");
	printf("|\tPID\t|\tBT\t|\tWT\t|\tTT\t|\n");
	for(i=0;i<n;i++){
		printf("|\t%d\t|\t%d\t|\t%d\t|\t%d\t|\n",p[i],bt[i],wt[i],tt[i]);
	}
	printf("_____\
n");
	printf("GANTT CHART");
	printf("\n_____\
n");
	for(i=0;i<n;i++)
	{
		printf("|P%d\t|",p[i]);
	}
printf("\n_____\n");
	printf("%d\t",wt[0]);
	for(i=0;i<n;i++){
		printf("%d\t",tt[i]);
	}
	printf("\nThe average waiting time is:%4f\n",avg_wt);
	printf("The average turn around time is:%4f\n",avg_tt);
}
```


gokul@gokul-ThinkPad-T460s: ~/S4/OS/LabCycle/EXP6_NonPreemptive
gokul@gokul-ThinkPad-T460s:~/S4/OS/LabCycle/EXP6_NonPreemptive$ gedit Priority.c
gokul@gokul-ThinkPad-T460s:~/S4/OS/LabCycle/EXP6_NonPreemptive$ gcc Priority.c -o Priority.
out
gokul@gokul-ThinkPad-T460s:~/S4/OS/LabCycle/EXP6_NonPreemptive$ ./Priority.out
Enter the number of processes: 3
Enter the and process id:
For process 1: 1
For process 2: 2
For process 3: 3
Enter the burst time:
For process P1: 2
For process P2: 3
For process P3: 4
Enter the Priority:
For process P1: 8
For process P2: 4
For process P3: 1
PID	BT	WT	TT
3	4	0	4
2	3	4	7
1	2	7	9
GANTT CHART
P3		P2		P1
0 4 7 9
The average waiting time is:3.666667
The average turn around time is:6.666667
gokul@gokul-ThinkPad-T460s:~/S4/OS/LabCycle/EXP6_NonPreemptive$