OPERATING SYSTEMS LAB
SJF SCHEDULING

-PENUGONDA V S GANASEKHAR
(CB.EN.U4CYS21055)

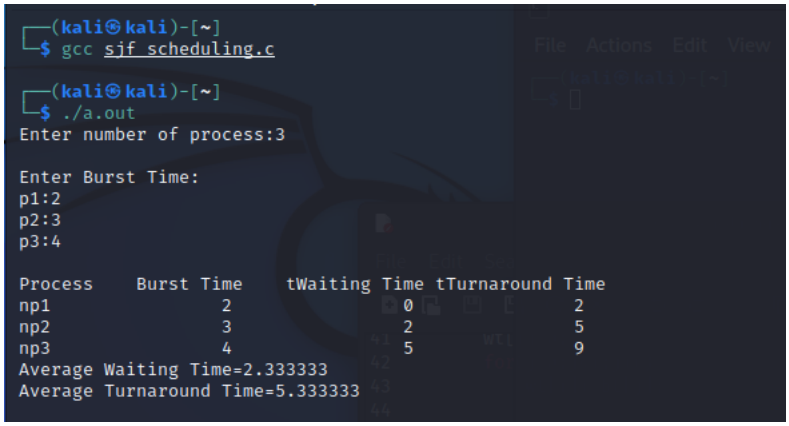
Code:

```
#include<stdio.h>
 int main()
{
    int bt[20],p[20],wt[20],tat[20],i,j,n,total=0,pos,temp;
    float avg_wt,avg_tat;
    printf("Enter number of process:");
    scanf("%d",&n);
    printf("\n");
    printf("Enter Burst Time: \n");
    for(i=0;i<n;i++)
    {
        printf("p%d:",i+1);
        scanf("%d",&bt[i]);
        p[i]=i+1;
    }
    printf("\n");
```

```
//sorting of burst times
 for(i=0;i<n;i++)
 {
    pos=i;
    for(j=i+1;j<n;j++)
    {
       if(bt[j]<bt[pos])
          pos=j;
    }

    temp=bt[i];
    bt[i]=bt[pos];
    bt[pos]=temp;

    temp=p[i];
    p[i]=p[pos];
    p[pos]=temp;
 }

 wt[0]=0;


 for(i=1;i<n;i++)
 {
    wt[i]=0;
```

```
        for(j=0;j<i;j++)
            wt[i]+=bt[j];

        total+=wt[i];
    }

    avg_wt=(float)total/n;
    total=0;

    printf("Process    Burst Time    tWaiting Time tTurnaround Time");
    for(i=0;i<n;i++)
    { printf("\n");
        tat[i]=bt[i]+wt[i];
        total+=tat[i];
        printf("np%d\t\t   %d\t\t    %d\t\t    %d",p[i],bt[i],wt[i],tat[i]);
    }

    avg_tat=(float)total/n;
    printf("\nAverage Waiting Time=%f\n",avg_wt);
    printf("Average Turnaround Time=%f\n",avg_tat);
}
```

Output:


(kali㉿kali)-[~]
$ gcc sjf scheduling.c
(kali㉿kali)-[~]
$ ./a.out
Enter number of process:3
Enter Burst Time:
p1:2
p2:3
p3:4
Process Burst Time tWaiting Time tTurnaround Time
np1 2 0 2
np2 3 2 5
np3 4 5 9
Average Waiting Time=2.333333
Average Turnaround Time=5.333333