

## //FCFS SCHEDULING ALGORITHM

```
#include<stdio.h>
struct process
{
    int w,pno,a,t,b,c;
};
int main()
{
    int n,i,j,tee;
    printf("enter no of processes : ");
    scanf("%d",&n);
    struct process p[n],temp;
    float s1=0,s2=0;
    for(i=0;i<n;i++)
    {
        printf("\nenter process no of process %d :",i);
        scanf("%d",&p[i].pno);
        printf("\nenter arrival time of process %d :",i);
        scanf("%d",&p[i].a);
        printf("\nenter burst time of process %d:",i);
        scanf("%d",&p[i].b);
    }
    for(i=0;i<n;i++)
    {
        for(j=0;j<n-i-1;j++)
        {
            if(p[j].a>p[j+1].a)
            {
                temp=p[j];
                p[j]=p[j+1];
                p[j+1]=temp;
            }
        }
    }
    tee = p[0].a;
    for(i=0;i<n;i++){
        p[i].a=p[i].a-tee;//relative arrival times
        printf("\t%d",p[i].a);}
    p[0].c=p[0].b;
    p[0].t=p[0].c-p[0].a;
    p[0].w=p[0].t-p[0].b;
    for(i=1;i<n;i++)
    {
        p[i].c=p[i].b+p[i-1].c;
        p[i].t=p[i].c-p[i].a;
        p[i].w=p[i].t-p[i].b;
    }

    printf("\n\npno : process number ; at : arrivaltime ; ct : completion time ; wt : waiting time ;
```

```

tat : turn arond time\n\n");
printf("\npno\t\tat\t\tct\t\twt\t\ttat");
for(i=0;i<n;i++)
{
    printf("\n%d\t\t%d\t\t%d\t\t%d\t\t%d ",p[i].pno,p[i].a+tee,p[i].c,p[i].w,p[i].t);
    s1=s1+p[i].w;s2=s2+p[i].t;
}
printf("\n\naverage waiting time :%f",s1/n);
printf("\n\naverage turn around time :%f\n",s2/n);
return 0;
}

```

## OUTPUT :

```

2          1          5          2          4
3          2          6          3          4

average waiting time :1.666667

average turn around time :3.666667
kavya@kavya-Inspiron-3521:~/kavya$ geany fcfs.c
kavya@kavya-Inspiron-3521:~/kavya$ gcc fcfs.c
kavya@kavya-Inspiron-3521:~/kavya$ ./a.out
enter no of processes : 3

enter process no of process 0 :1
enter arrival time of process 0 :0
enter burst time of process 0:3
enter process no of process 1 :2
enter arrival time of process 1 :1
enter burst time of process 1:2
enter process no of process 2 :3
enter arrival time of process 2 :2
enter burst time of process 2:1
    0      1      2
pno : process number ; at : arrivaltime ; ct : completion time ; wt : waiting time ; tat : turn arond time

pno          at          ct          wt          tat
1             0           3           0           3
2             1           5           2           4
3             2           6           3           4

average waiting time :1.666667

average turn around time :3.666667
kavya@kavya-Inspiron-3521:~/kavya$ █

```