**a)FCFS (First Come First Serve)**

**Aim**: Write a C program to implement the various process scheduling mechanisms such as FCFS

scheduling.

Algorithm:

1: Start the process

2: Accept the number of processes in the ready Queue

3: For each process in the ready Q, assign the process id and accept the CPU burst time

4: Set the waiting of the first process as ‘0’ and its burst time as its turn around time

5: for each process in the Ready Q calculate

a. Waiting time for process(n)= waiting time of process (n-1) + Burst time of process(n-1)

b. Turnaround time for Process(n)= waiting time of Process(n)+ Burst time for process(n)

6: Calculate

a. Average waiting time = Total waiting Time / Number of process

b. Average Turnaround time = Total Turnaround Time / Number of process

7: Stop the process

**Program:**

#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("\nEnter Burst Time:\n");

for(i=0;i<n;i++)

{

printf("p % d:",i+1);

scanf("%d",&bt[i]);

p[i]=i+1; //contains process number

}

wt[0]=0; //waiting time for first process will be zero

//calculate waiting time

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; //average waiting time

total=0;

printf("\nProcess\t Burst Time \tWaiting Time\tTurnaround Time");

for(i=0;i<n;i++)

{

tat[i]=bt[i]+wt[i]; //calculate turnaround time

total+=tat[i];

printf("\np%d\t\t %d\t\t %d\t\t\t%d",p[i],bt[i],wt[i],tat[i]);

}

avg\_tat=(float)total/n; //average turnaround time

printf("\n\nAverage Waiting Time=%f",avg\_wt);

printf("\nAverage Turnaround Time=%f\n",avg\_tat);

}