AIM:

Write A C Program to implement First Come First Serve Scheduling Algorithm with Arrival Times.

Source Code:

```
#include<stdio.h>
int main()
{
   int pno[10],at[10],bt[10],wt[10],tat[10],tp,twt=0,ttat=0,delay=0,ct[10];
   int i,j,temp;
   float awt,atat;
   printf("First Come First Serve Scheduling - with Arrival Times\n\n");
   printf("\nEnter the No of processes:");
   scanf("%d",&tp);
   for(i=0;i<tp;i++)
   {
      printf("Enter process no");
      scanf("%d",&pno[i]);
      printf("Enter the arrival time for process %d:",pno[i]);
      scanf("%d",&at[i]);
      printf("Enter the burst time for process %d:",pno[i]);
      scanf("%d",&bt[i]);
      wt[i]=0;
   }
   for(i=0;i<tp;i++)
   {
      for(j=i;j<tp;j++)
      {
         if(at[i]>at[j])
         {
            temp=at[i];
            at[i]=at[j];
            at[j]=temp;
            temp=pno[i];
            pno[i]=pno[j];
            pno[j]=temp;
            temp=bt[i];
            bt[i]=bt[j];
            bt[j]=temp;
         }
      }
   }
   wt[0]=0;
   ct[0]=bt[0]+at[0];
   tat[0]=wt[0]+bt[0];
   for(i=1;i<tp;i++)
   {
      if(at[i]<ct[i-1])
      {
         wt[i]=ct[i-1]-at[i];
```

```
            ct[i]=ct[i-1]+bt[i];
        }
        else
        {
            wt[i]=0;
            ct[i]=at[i]+bt[i];
        }
        twt = twt+wt[i];
        tat[i]=wt[i]+bt[i];
        ttat=ttat+tat[i];
    }
    awt=(float)twt/tp;
    atat=(float)ttat/tp;

    printf("\nPNO\tAT\tBT\tWT\tTAT\n");
    for(int i=0;i<tp;i++)
    {
        printf("%d\t%d\t%d\t%d\t%d\n",pno[i],at[i],bt[i],wt[i],tat[i]);
    }
    printf("\nAverage Waiting Time:%f",awt);
    printf("\nAverage Turnaround time:%f",atat);
    return 0;
}
```

Output:

First Come First Serve Scheduling - with Arrival Times

Enter the No of processes:5
Enter process no1
Enter the arrival time for process 1:4
Enter the burst time for process 1:3
Enter process no2
Enter the arrival time for process 2:2
Enter the burst time for process 2:2
Enter process no3
Enter the arrival time for process 3:1
Enter the burst time for process 3:5
Enter process no4
Enter the arrival time for process 4:5
Enter the burst time for process 4:7
Enter process no5
Enter the arrival time for process 5:3
Enter the burst time for process 5:3

PNO	AT	BT	WT	TAT
3	1	5	0	5
2	2	2	4	6
5	3	3	5	8
1	4	3	7	10
4	5	7	9	16

Average Waiting Time:5.000000
Average Turnaround time:8.000000