6.program to implement CPU scheduling for priority scheduling.

```c
#include<stdio.h>
int main()
{
   int bt[20],p[20],pr[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 and priority\n");
   for( i=0;i<n;i++)
   {
       printf("\nP[%d]:\n",i+1);
       printf("burst time:");
       scanf("%d",&bt[i]);
       printf("priority:");
       scanf("%d",&pr[i]);
       p[i]=i+1;
   }

   for(i=0;i<n-1;i++)
   {

       for(j=1;j<=n-i-1;j++)
       {
           if(pr[j-1]>pr[j])
            {
                int t=pr[j-1];
                pr[j-1]=pr[j];
                pr[j]=t;

                t=bt[j-1];
                bt[j-1]=bt[j];
                bt[j]=t;

                t=p[j-1];
                p[j-1]=p[j];
                p[j]=t;

            }
       }
   }
```

```
   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("/nProcess  Burst time  waiting time  turnaround time");
   for(int i=0;i<n;i++)
   {

       tat[i]=bt[i]+wt[i];
       total+=tat[i];
       printf("\n  P[%d]        %d            %d
%d",p[i],bt[i],wt[i],tat[i]);

   }
   avg_tat=(float)total/n;
   printf("\n\nAverage waiting time=%f",avg_wt);
   printf("\nAverage Turnaroun time=%f\n",avg_tat);
return(0)
```

```
manujjain@manujs-MacBook-Air Downloads % cd "/Users/manujjain/Downloads/" && gcc os.c
ENTER number of process:4

Enter Burst time and priority

P[1]:
burst time:2
priority:2

P[2]:
burst time:14
priority:1

P[3]:
burst time:6
priority:4

P[4]:
burst time:6
priority:3
/nProcess  Burst time  waiting time  turnaround time
  P[2]       14           0                14
  P[1]       2            14               16
  P[4]       6            16               22
  P[3]       6            22               28

Average waiting time=13.000000
Average Turnaroun time=20.000000
```