PROGRAM- To simulate Non Pre-emptive Priority Scheduling Policy

CODE:

```
#include <stdio.h>
struct Processes
{
   int pid;
   int burst;
   int priority;
   int wait;
   int turn;
   //int arrival,
}temp;

int main()
{
 struct Processes p[10];
 int n,i,j,waiting=0,exetime,starttime=0;
 float avgt=0,avgw=0;
 printf("Enter Number of Processes: ");
 scanf("%d",&n);

for(int i=0;i<n;i++)
{
   p[i].pid=i+1;
   printf("Enter Burst Time and Priority  for Process %d: ",i+1);
   scanf("%d %d",&p[i].burst,&p[i].priority);
}
```

```
for(i=0;i<n-1;i++)
{
   for(j=0;j<n-i-1;j++)
   {
      if (p[j].priority > p[j+1].priority)
      {
         temp=p[j];
         p[j]=p[j+1];
         p[j+1]=temp;
      }
   }
}

printf("Sorted order as per Priority : \n");
printf("Process Burst  Priority  From  To\n");
for(i=0;i<n;i++)
{
   exetime=starttime+p[i].burst;
   printf("P%d \t %d \t %d \t %d \t %d \n",p[i].pid,p[i].burst,p[i].priority,starttime,exetime);
   starttime +=p[i].burst;
}

 printf("The Gnatt Chart \n");
  for(i=0;i<n;i++)
  {
  if(i==0)
  printf("P%d ",p[i].pid);
  else
    printf("--> P%d",p[i].pid);
  }
```

```
 printf("\n The Waiting time and TurnAround time is: \n");
 for(i=0;i<n;i++)
{
   p[i].wait=waiting;
   p[i].turn=waiting+p[i].burst;
   printf("P%d Waiting= %d TurnAround= %d \n",p[i].pid,p[i].wait,p[i].turn);
   avgt +=p[i].turn;
   avgw +=p[i].wait;
   waiting +=p[i].burst;
}
avgt=avgt/n;
avgw=avgw/n;
printf("Average Turnaround time is %f and Waiting Time is %f",avgt,avgw);
return 0;
}
```

OUTPUT:

Enter Number of Processes: 4

Enter Burst Time and Priority for Process 1: 6 4

Enter Burst Time and Priority for Process 2: 8 1

Enter Burst Time and Priority for Process 3: 7 3

Enter Burst Time and Priority for Process 4: 3 2

Sorted order as per Priority:

Process	Burst	Priority	From	To
P2	8	1	0	8
P4	3	2	8	11
P3	7	3	11	18
P1	6	4	18	24

The Gnatt Chart

P2 --> P4--> P3--> P1

The Waiting time and TurnAround time is:

P2 Waiting= 0 TurnAround= 8

P4 Waiting= 8 TurnAround= 11

P3 Waiting= 11 TurnAround= 18

P1 Waiting= 18 TurnAround= 24

Average Turnaround time is 15.250000 and Waiting Time is 9.250000