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Sem - 2nd Sem [Mid Sem Practical]

Practical - operating system

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Section - 2A

Q2 Problem statement & solution

```
#include <stdio.h>
int main()
{
int a[10], bt[10], rt[10], endTime, i, smallest;
int remain=0, n, time, sum_wait=0, sum_turnaround=0;
printf("Enter number of processes: ");
scanf("%d", &n);
for(i=0; i<n; i++)
  {
   printf("Enter arrival time for process P%d: ", i+1);
   scanf("%d", &at[i]);
   printf("Enter burst time for process P%d: ", i+1);
   scanf("%d", &bt[i]);
  rt[i] = bt[i];
  }
printf("\n\n Process\t | Turnaround time | waiting time\n\n
 rt[9]=9999;
for(time=0; remain!=n; time++)
  {
   smallest=9;
```

```
for (i=0; i<n; i++)
{ if (at[i] <= time && rt[i] < rt[smallest] && rt[i] > 0)
  {
  smallest = i;
}
}
rt[smallest]--;
if (rt[smallest] == 0)
  {
  remain++;
  end time = time + 1;
printf("\n P[%d] \t | \t %d \t | \t %d", smallest+1, end time -
      at[smallest], end time - bt[smallest] - at[smallest]);
Sum_wait += end time - bt[smallest] - at[smallest];
Sum_turnaround += end time - at[smallest];
  }
}
printf("\n\n Average waiting time = %f \n", sum_wait * 1.0/n);
printf("\n Average Turnaround time = %f", sum_turnaround * 1.0/5);
return 0;
}
```