

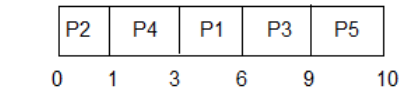
How to calculate Average Waiting Time and average Turn-around time in SJF Scheduling?

In SJF (Shortest Job First) Scheduling method.

Process	Arrival Time (ms)	Processing Time (ms)
P1	8	3
P2	2	1
P3	1	3
P4	3	2
P5	4	4


How to calculate Average Waiting Time and average Turn-around time?

Is Gannt Chart correct ?




scheduling

edited Mar 7 '13 at 22:20

 **Servy**
129k10113211

asked Mar 18 '12 at 13:37

 **Failed_Noob**
531133261

protected by **Community** ♦ Apr 3 '13 at 20:26

This question is protected to prevent "thanks!", "me too!", or spam answers by new users. To answer it, you must have earned at least 10 **reputation** on this site.

3 Answers

Gantt chart is wrong... First process P3 has arrived so it will execute first. Since the burst time of P3 is 3sec after the completion of P3, processes P2,P4, and P5 has been arrived. Among P2,P4, and P5 the shortest burst time is 1sec for P2, so P2 will execute next. Then P4 and P5. At last P1 will be executed.

Gantt chart for this ques will be:




Average waiting time=(0+2+2+3+3)/5=2

Average Turnaround time=(3+3+4+7+6)/5=4.6

edited Mar 22 at 16:37

 **vinayawsm**
435216

answered Apr 17 '12 at 22:4

 **Hifzan**
1142

it is wrong. correct will be

P3 P2 P4 P5 P1 0 3 4 6 10 as the correct difference are these

Waiting Time (0+3+4+6+10)/5 = 4.6

Ref:

http://www.it.uu.se/edu/course/homepage/oskomp/vt07/lectures/scheduling_dout.pdf

answered Nov 25 '12 at 16:05



The Gantt charts given by Hifzan and Raja are for FCFS algorithms.

With an SJF algorithm, processes can be interrupted. That is, every process does not necessarily execute straight through their given burst time.

P3|P2|P4|P3|P5|P1|P5

1|2|3|5|7|8|11|14

P3 arrives at 1ms, then is interrupted by P2 and P4 since they both have small burst times and then P3 resumes. P5 starts executing next, then is interrupted by P1 since P1's arrival time is smaller than P5's. You must note the arrival times and be careful. These scenarios can be trickier than how they appear at-first-glance.

EDIT: This applies only to Preemptive SJF algorithms. A plain SJF algorithm is non-preemptive, meaning it does not interrupt a process.

edited Mar 7 '14 at 0:52



answered Mar 7 '13 at 15:56

