**2. Explain the difference between FIFO and Fair scheduler**

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| **S.No** | **FIFO** | **Fair scheduler** |
| 1. | The FIFO Scheduler places applications in a queue and runs them in the order of submission (first in, first out). | With the Fair Scheduler, there is no need to reserve a set amount of capacity, since it will dynamically balance resources between all running jobs. |
| 2. | Requests for the first application in the queue are allocated first; once its requests have been satisfied, the next application in the queue is served, and so on. | Just after the first (large) job starts, it is the only job running, so it gets all the resources in the cluster. |
| 3. | The FIFO Scheduler has the merit of being simple to understand and not needing any configuration, but it’s not suitable for shared clusters. | When the second (small) job starts, it is allocated half of the cluster resources, so that each job is using its fair share of resources. |
| 4. | Large applications will use all the resources in a cluster, so each application has to wait its turn. On a shared cluster, it is better to use the Capacity Scheduler or the Fair Scheduler. | After the small job completes and no longer requires resources, the large job goes back to using the full cluster capacity again. The overall effect is both high cluster utilization and timely small job completion. |