Assignment Algorithms

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List of Algorithms

First-Come First-Served Algorithm

ALGORITHM FirstComeFirstServed()

Output: An array *IJob*[ ] which contains all the jobs in a scheduler and they are sorted in non-descending order of the *timeReceived* of the job

```
1: jobs ← convert Jobs to array
2: collection ← new JobCollection with same capacity as jobs
3: // Consider that n represents the number of jobs in a collection
4: for all job in jobs do
5:     add job to collection
6: for i ← 0 to n − 2 do
7:     min ← i
8:     for j ← i + 1 to n − 1 do
9:         if pJobs[j].timeReceived < pJobs[min].timeReceived then
10:            min ← j
11:    Swap jobs[i] and jobs[min]
12: return pJobs
```

Shortest Job first Algorithm

ALGORITHM ShortestJobFirst()

Output: An array *IJob*[ ] which contains all the jobs in a scheduler and they are sorted in non-descending order of the *executionTime* of the job

```
1: jobs ← convert Jobs to array
2: collection ← new JobCollection with same capacity as jobs
3: // Consider that n represents the number of jobs in a collection
4: for all job in jobs do
5:     add job to collection
6: for i ← 0 to n − 2 do
7:     min ← i
8:     for j ← i + 1 to n − 1 do
9:         if pJobs[j].executionTime < pJobs[min].executionTime then
10:            min ← j
11:    Swap jobs[i] and jobs[min]
12: return pJobs
```

Priority Algorithm

ALGORITHM ShortestJobFirst()

Output: An array $IJob[\ ]$ which contains all the jobs in a scheduler and they are sorted in non-ascending order of the *priority* of the job

```
1:  jobs ← convert Jobs to array
2:  collection ← new JobCollection with same capacity as jobs
3:  // Consider that n represents the number of jobs in a collection
4:  for all job in jobs do
5:      add job to collection
6:  for i ← 0 to n − 2 do
7:      min ← i
8:      for j ← i + 1 to n − 1 do
9:          if pJobs[j].priority < pJobs[min].priority then
10:             min ← j
11:     Swap jobs[i] and jobs[min]
12: return pJobs
```