Dat 103 oblig 1
Gruppe 61
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Task 0

Shared on .tar

Task 1

```java
4 usages
@Override
public void schedule() {

    // Task 1: Complete the implementation of First Come, First Served scheduling
    if (selected == null) {
        // not currently working on a task
        selected = ready.poll();
        if (selected == null) {
            // no more tasks
            return;
        }
        selected.start();
    } else {
        // working with task
        if (selected.isDone()) {
            // done & schedule new
            selected.stop();
            selected = null;
            schedule();
        }
    }

}

}
```
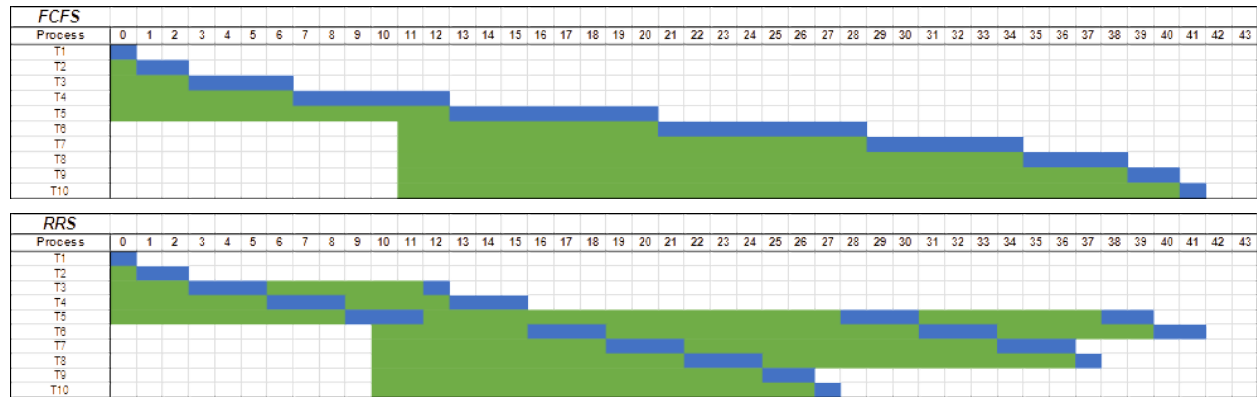
Task 2

```
"T=0 Scheduled: T1 Ready: T2, T3, T4, T5",
"T=1 Scheduled: T2 Ready: T3, T4, T5", // T1 FERDIG
"T=2 Scheduled: T2 Ready: T3, T4, T5",
"T=3 Scheduled: T3 Ready: T4, T5", // T2 FERDIG
"T=4 Scheduled: T3 Ready: T4, T5",
"T=5 Scheduled: T3 Ready: T4, T5",
"T=6 Scheduled: T4 Ready: T5, T3", // T3 1 IGJEN
"T=7 Scheduled: T4 Ready: T5, T3",
"T=8 Scheduled: T4 Ready: T5, T3",
"T=9 Scheduled: T5 Ready: T3, T4", // T4 3 IGJEN
"T=10 Scheduled: T5 Ready: T3, T4",
"T=11 Scheduled: T5 Ready: T3, T4, T6, T7, T8, T9, T10",
"T=12 Scheduled: T3 Ready: T4, T6, T7, T8, T9, T10, T5", // T5 5 IGJEN
"T=13 Scheduled: T4 Ready: T6, T7, T8, T9, T10, T5", // T3 FERDIG
"T=14 Scheduled: T4 Ready: T6, T7, T8, T9, T10, T5",
"T=15 Scheduled: T4 Ready: T6, T7, T8, T9, T10, T5",
"T=16 Scheduled: T6 Ready: T7, T8, T9, T10, T5", // T4 FERDIG
"T=17 Scheduled: T6 Ready: T7, T8, T9, T10, T5",
"T=18 Scheduled: T6 Ready: T7, T8, T9, T10, T5",
"T=19 Scheduled: T7 Ready: T8, T9, T10, T5, T6", // T6 5 IGJEN
"T=20 Scheduled: T7 Ready: T8, T9, T10, T5, T6",
"T=21 Scheduled: T7 Ready: T8, T9, T10, T5, T6",
"T=22 Scheduled: T8 Ready: T9, T10, T5, T6, T7",// T7 3 IGJEN
"T=23 Scheduled: T8 Ready: T9, T10, T5, T6, T7",
"T=24 Scheduled: T8 Ready: T9, T10, T5, T6, T7",
"T=25 Scheduled: T9 Ready: T10, T5, T6, T7, T8", // T8 1 IGJEN
"T=26 Scheduled: T9 Ready: T10, T5, T6, T7, T8",
"T=27 Scheduled: T10 Ready: T5, T6, T7, T8", // T9 FERDIG
"T=28 Scheduled: T5 Ready: T6, T7, T8", // T10 FERDIG
"T=29 Scheduled: T5 Ready: T6, T7, T8",
"T=30 Scheduled: T5 Ready: T6, T7, T8",
"T=31 Scheduled: T6 Ready: T7, T8, T5", // T5 2 IGJEN
"T=32 Scheduled: T6 Ready: T7, T8, T5",
"T=33 Scheduled: T6 Ready: T7, T8, T5",
"T=34 Scheduled: T7 Ready: T8, T5, T6", // T6 2 IGJEN
"T=35 Scheduled: T7 Ready: T8, T5, T6",
"T=36 Scheduled: T7 Ready: T8, T5, T6",
"T=37 Scheduled: T8 Ready: T5, T6", // T7 FERDIG
"T=38 Scheduled: T5 Ready: T6", // T8 FERDIG
"T=39 Scheduled: T5 Ready: T6",
"T=40 Scheduled: T6 Ready: ", // T5 FERDIG
"T=41 Scheduled: T6 Ready: ",
"T=42 Scheduled: Ready: "// T6 FERDIG
```

Task 3

In our GANTT we have colored *ready* as green and *scheduled* as blue.

From the two GANTT forms we can see that in the *FCFS* schedule the T10 wait the longest and T1 is shortest. In the *RR* schedule T1 still waits the shortest, but T5 waits the longest in total.

When we summarize all colored cells in *FCFS*, combining waiting and executing, we come to an average waiting time for the ten tasks at 17.6. The *RR* scheduler, with the same method, come to an average waiting time of 19.5.