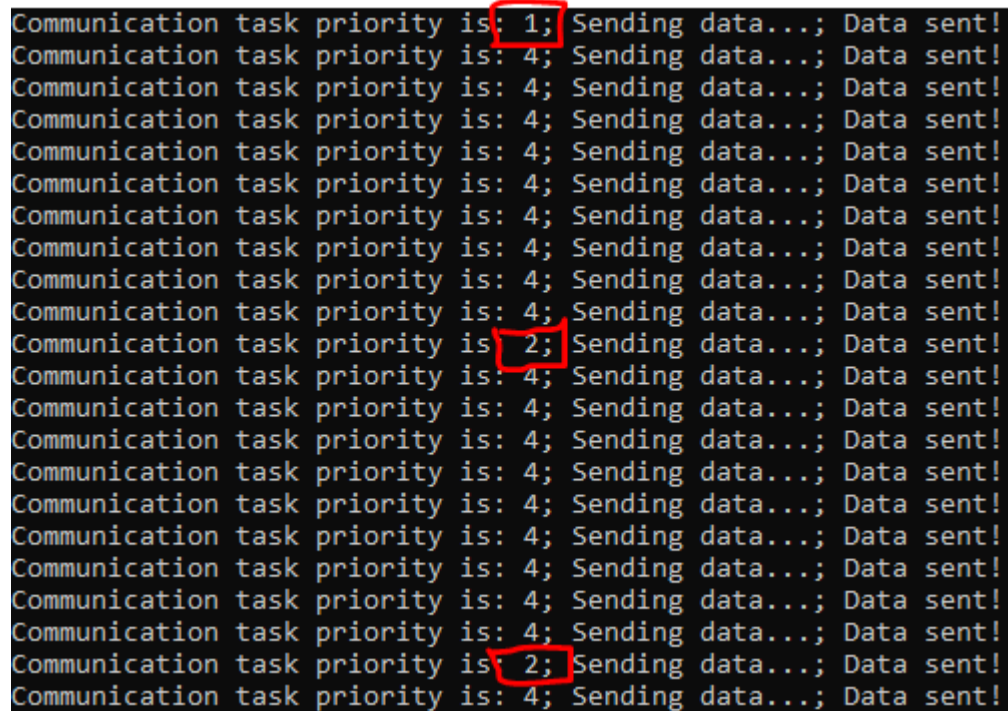


Assignment 2- Development of Real-Time Systems

✓ Screenshot of the execution:



```
Communication task priority is: 1; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 2; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
Communication task priority is: 2; Sending data...; Data sent!
Communication task priority is: 4; Sending data...; Data sent!
```

✓ Answers for the following questions:

- Why is "matrixtask" using most of the CPU utilization?
 - Because it has more priority than communication task.
- Why must the priority of "communicationtask" increase in order for it to work properly
 - Because it needs to be incremented more than 3, which is the priority for matrix task, in order to have the higher priority order. In that sense, the package transmission can be sending every 200 ms without being preempted by matrix task.
- What happens to the completion time of "matrixtask" when the priority of "communicationtask" is increased?
 - Nothing happens, because it has the condition that if communication task is less than 200 ms its priority decreased again, in order to meet the completion task of matrixtask.

- How many seconds is the period of "matrixtask"? (Hint: look at `vApplicationTickHook()` to measure it)

```
Sending data...
Period of matrixtask is: 1901(ms)
Data sent!
Period of matrixtask is: 1846(ms)
Sending data...
Period of matrixtask is: 1853(ms)
Data sent!
Period of matrixtask is: 1847(ms)
Sending data...
Period of matrixtask is: 1866(ms)
Data sent!
Period of matrixtask is: 1843(ms)
```