Real-Time Systems Lecture 8
These were some of the more important things written out during the class. They are meant to be read in conjunction with the PowerPoint slides and the textbook.

2) **Priority Exchange**: Treat the sporadic server as a periodic task with period $P_{sporadic}$.

- When a sporadic workload exists to fill the slot, run the sporadic task.

- If there is no sporadic task waiting when the slot begins, exchange priorities between the sporadic server and whatever periodic job occupies this slot.
A problem is in \( P \) if its complexity is a polynomial function of its input size. 

\[ \text{E.g., Quicksort } O(n^2) \]
\[ an^2 + bn + c \]

A problem is in \( NP \) if, given a solution to that problem, the task of checking the correctness of that solution is in \( P \).

\[ P \subset NP \]

\[ \text{Is } P \neq NP? \]
\[ \text{[NOT KNOWN]} \]
There is a family of NP problems, $F$, with the following property:

If $f_i \in F$ is unique so is every other member of $F$.

Such problems are said to be NP-complete.