**PS7 Kronos – Intro to Regular Expression**

In this assignment, we were to utilize regular expressions to parse Kronos InTouch time clock records. We were to check particular lines in the log with regular expressions and report whether a boot was successful or not in a separate file.

**Key concepts**

This assignment's code was included in a single source file, main.cpp. For both the regex functionality and interacting with the date and time, I utilized the Boost libraries. The only regex I used was to capture the date and time that each boot begun or boot finished line reported. The boot messages themselves were constant and could be scanned without using regex.

**What I Accomplished**

Depending on the message scanned, the program scans a log file line by line and decides if a boot has started or completed. The date and time are stored and reported if it contains a boot start message. When a boot finished notification is scanned, the date and time, as well as the total boot duration from start to finish, are stored again. This data is stored in a report file (.rpt) that contains each successful and unsuccessful boot attempt.

**What I Learned**

Despite the fact that this was a short task, I learnt the value of regular expressions and how they may be used when scanning for or extracting string/character data. I also discovered how to retrieve the total boot time between the boot start and boot end events in the log using the Boost date/time library.