

## 1. Lab Series – Overview and some Diagnosis

### Assignment 1.1:

Perform some initial system diagnosis. Use the program `winmsd` to answer the following set of questions:

- What is the name of the computer you are using?
- Which version of the Windows 2000 operating system has been installed?
- What is the spare/overall capacity of volume C:?
- What is the main memory capacity of your computer?
- Which percentage of the main memory is currently in use?
- How many system services are currently running?

### Assignment 1.2:

Start the performance monitor tool (`perfmon`). Add counters for interrupts/second, privileged time, processor time, and user time to the display.

- Give an explanation about the actual measurements. Which characteristics of the operating system manifest in those values?
- Explain changes to the values displayed originating from execution of a command shell (`cmd.exe`), keyboard or mouse activities. Try to maximize the values displayed by performance monitor.

### Assignment 1.3:

Make yourself familiar with the process viewer program `pview` (from Visual Studio) and use it to answer the following set of questions:

- How many processes are currently running in the system?
- Identify the idle-process. What is its base priority?
- What is the dynamic priority of the thread contained within the idle process?
- Identify the process executing the `pview`-program. What is its base priority?
- How many threads are running in context of the `pview` process?
- At which priorities are those threads currently running?

### **Assignment 1.4:**

Bring up task manager using the Ctrl-Shift-Esc key sequence. Interpret the output given by task manager to answer the following questions:

- Which applications are currently active?
- What is the relation between process id as displayed by task manager and the hexadecimal value shown in the process viewer display?
- Which set of performance counters in performance monitor is roughly comparable with the CPU usage diagram in task manager?
- Is there an equivalent to task managers memory usage diagram within performance monitor?
- What is the overall number of handles currently used within the operating system?
- How many threads/processes are currently running in the system?