

Windows Sysinternals

CS453: Operating systems

Overview

In this assignment we are going to explore some very powerful tools that you can use on Microsoft Windows to solve common programming/OS related issues. For this assignment you will simply be taking screenshots of each step and pasting them into your reflection.

Tasks

- Install the [Sysinternals Suite](#) from Microsoft website (it just contains a zipped folder with a set of system programs). Add the unzipped folder to your system path.
- Run the **clockres** program that came with Sysinternals suite from the **powershell** console.
- Startup the process explorer **procexp** program in powershell from SysInternals Suite and add additional columns for number of threads and priority.
- Now start *notepad* in realtime mode from the command console with the command **start /realtime Notepad.exe**. You can also do this from the powershell by first starting the command console by typing the command **cmd** and then using the above **start** command.
- Find notepad in the process explorer, highlight it to show its priority and take another screen capture. Is the priority real-time (greater than 16)? If not, how would you make it have real-time priority? Your screenshot should show that **notepad** is running under real-time priority.
- Check the priority of **notepad** with the following command in powershell.

```
$a = ps; ps -inputobject $a | format-table -view priority
```

- Start the task manager and add columns for threads and priority. Again find the notepad executable in the *Processes* tab and right click on it to see/change priority.

Submission

You MUST submit either a Microsoft Word document (.docx) or a PDF to get credit with all of the required screenshots.



Files committed to git (backpack)

Required files to submit through git (backpack), if you created more helper files that is fine.

1. sysinternal.docx OR sysinternal.pdf

Run the following commands

1. make clean
2. git add <file ...> (on each file!)
3. git commit -am "Finished homework"
4. git push

Submit to Blackboard

You must submit the sha1 hash of your final commit on the correct branch. Your instructor needs this in order to troubleshoot any problems with submission that you may have.

- git rev-parse HEAD

Functional Requirements

- Run the clockres program 3
- Startup the process explorer procexp 3
- Find notepad in the process explorer 3
- Check the priority of notepad (powershell) 3
- Check the priority of notepad (task manager) 3
- Total Grade 15

