



Dear Ivan,

Following our call, please see below the home assignment from our technical managers. Take a look at it and let us know how much time it would take you to complete it.

Once you've completed the task, please send your solution to me per email, I will forward it to the managers so that they can have a look at it prior to the second interview.

It is essential that all code you contribute is original and created by you, without any use of AI code generators, we also discourage the use of third-party libraries, except for specialized operations like computing hashes or other necessary functionalities.

Thank you and good luck!

The Task:

Make a Windows application which will gather information about all running processes in a system and display it in its main window in a form of tree.

- Root tree elements are two: the first named "Processes", which children are root system processes, their children elements are processes, that started by that root processes, etc. Element name of tree should be exe file name of the corresponding process.
- Second root element is named "Sessions", which children elements represent currently running user sessions. Element name is Session ID.
- On click of any tree element, in another part of same window, extended information of the clicked element should be displayed, which contains at least (for process): full exe file path and name, process ID, User session ID. For session element the extended info is Session state only.
- The information of the tree and detailed view should be refreshed each 10 sec without any flickering of any visual elements of window.
- The window should contain a button which allows to calculate sha-256 hashes of exe files of all running processes. This should be done in background, without interrupting of tree refresh or window repainting.



- Resulting hashes should be listed in separate memo control, placed in the main window.
- A progress indicator shows the progress of that operation.
- Application should stay responsive to user input at any time.
- Using external/third-party code for calculating hashes is allowed. Please place it in separate unit in this case.