Project 4 - A help interface

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**User Analysis:**

This program is designed to be used by various types of users. Those include computer programmers and computer enthusiasts who may need to refresh on one or two commands, students and people who are new to Linux and would like to get familiar with Linux commands.

**Task Analysis:**

* Objects
  + Category object
    - Name
    - List containing commands
  + Command object
    - Name
    - Short Description
    - Detailed Description
    - Options e.g. -l in ls command
    - Format
    - Examples to show how to use the command
* Actions
  + Selecting a category
  + Selecting a command
  + Scrolling through categories
  + Scrolling through commands
  + Scrolling through details of a command
  + Searching for a specific command
* Examples
  + The user scrolls through the list of all the available categories
  + The user selects the File and System category to see all the commands in this category.
  + Once the user selects a category, he/she scrolls through the list of all the commands in that category. If the category is empty a label will be shown telling the user that the selected category is empty. If nothing is selected, the user is told that nothing a selected.
  + The user selects the “ls” command to view more details of.
  + Once presented with the data the user scrolls through all the details of the ls command that was previously selected.
  + The user searches for a command as opposed to navigating to it to be quicker. If an exact command is found then that command is then shown. If there are multiple results then the user is shown all the resulting commands to choose from. If nothing was found then the user is notified that no commands were found and is given the option to search online for such command.

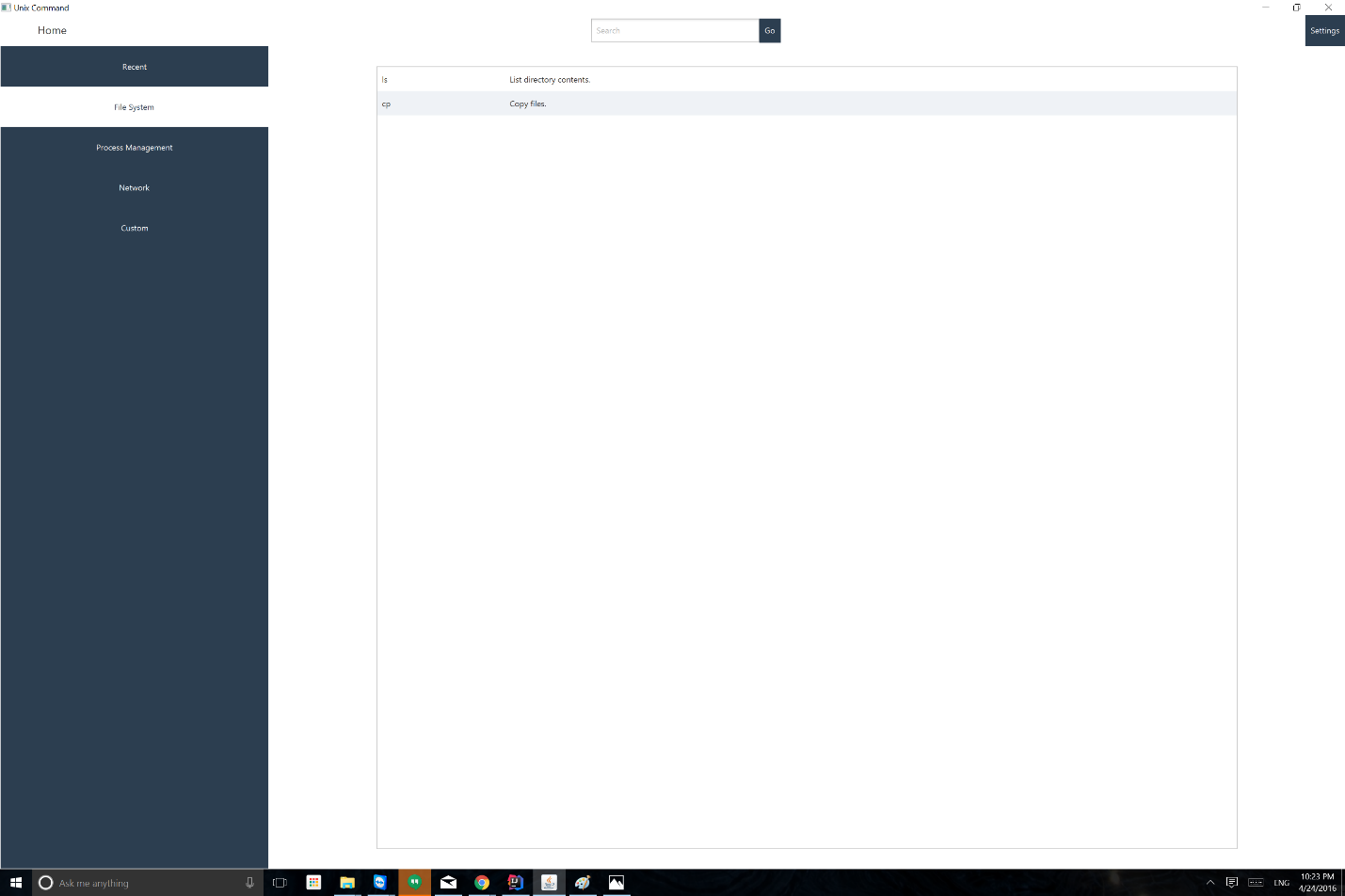
**Rough Design:**

**Design Rationale:**

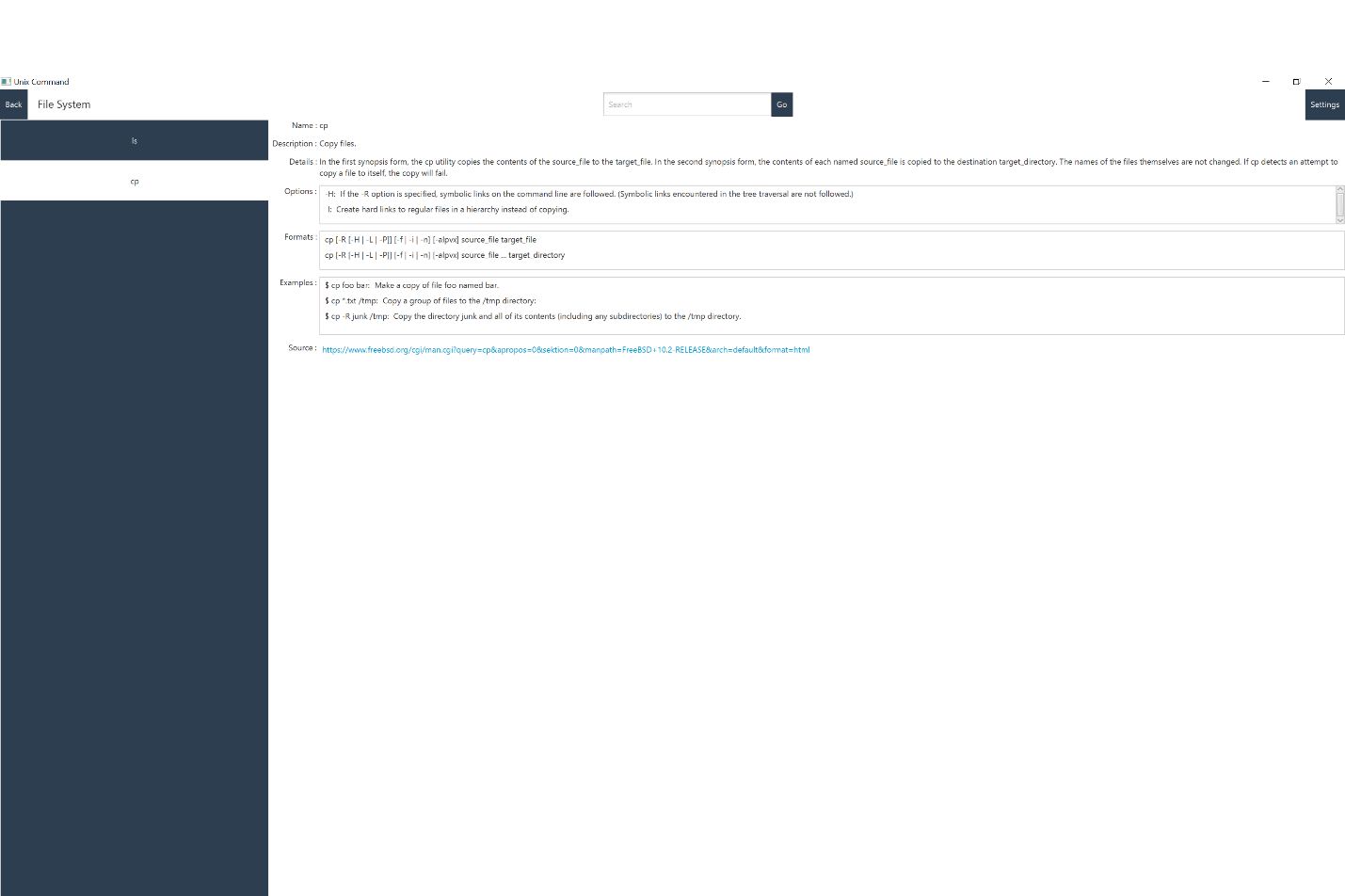
This User Interface is based on a master/details design. On the main page, the left side contains the list of categories each of which are selectable. On the right, as the user selects a category, the right side shows the list of commands in that category, each displaying the name and a short description of the command. The reason for showing the name and a short description is for expert users who don’t need to see all the details of a command and/or simply want to remind themselves of what that command does. For the new users and students, a command can be clicked on to view more details about it. This page is also based on a master/details design. On the left side, the list of all commands in the same category is displayed and can be selected. On the right, Information about the selected command is shown. That includes the name, short description, detailed description, all the different options e.g. -l option for the “ls” command, available for this command, formats on the usability of the command, examples on how to use the command and a link to a webpage where the user can get even more details about the command. On top, next to the back button, the name of the category is shown so the user knows which category he or she is currently in. A search functionality is also implemented for users that knows what command he or she is looking for. If an exact command is found the detailed view of the command is shown. If there is more than 1 result, then they are all displayed for the user to choose. If nothing was found, then the user is notified and given an option to search online for more. For expert users, a shortcut (ctrl + F) will instantly give focus to the search textbox where the user can type and hit enter/return to perform the search. A “Recent” category is implemented, and anytime a command is viewed it gets added to this category without duplications. This list can be cleared under personalization in settings. Some unimplemented features include the ability to add and edit a custom command using using a form, and delete a command while having the user confirm the deletion.

**Working Program:**

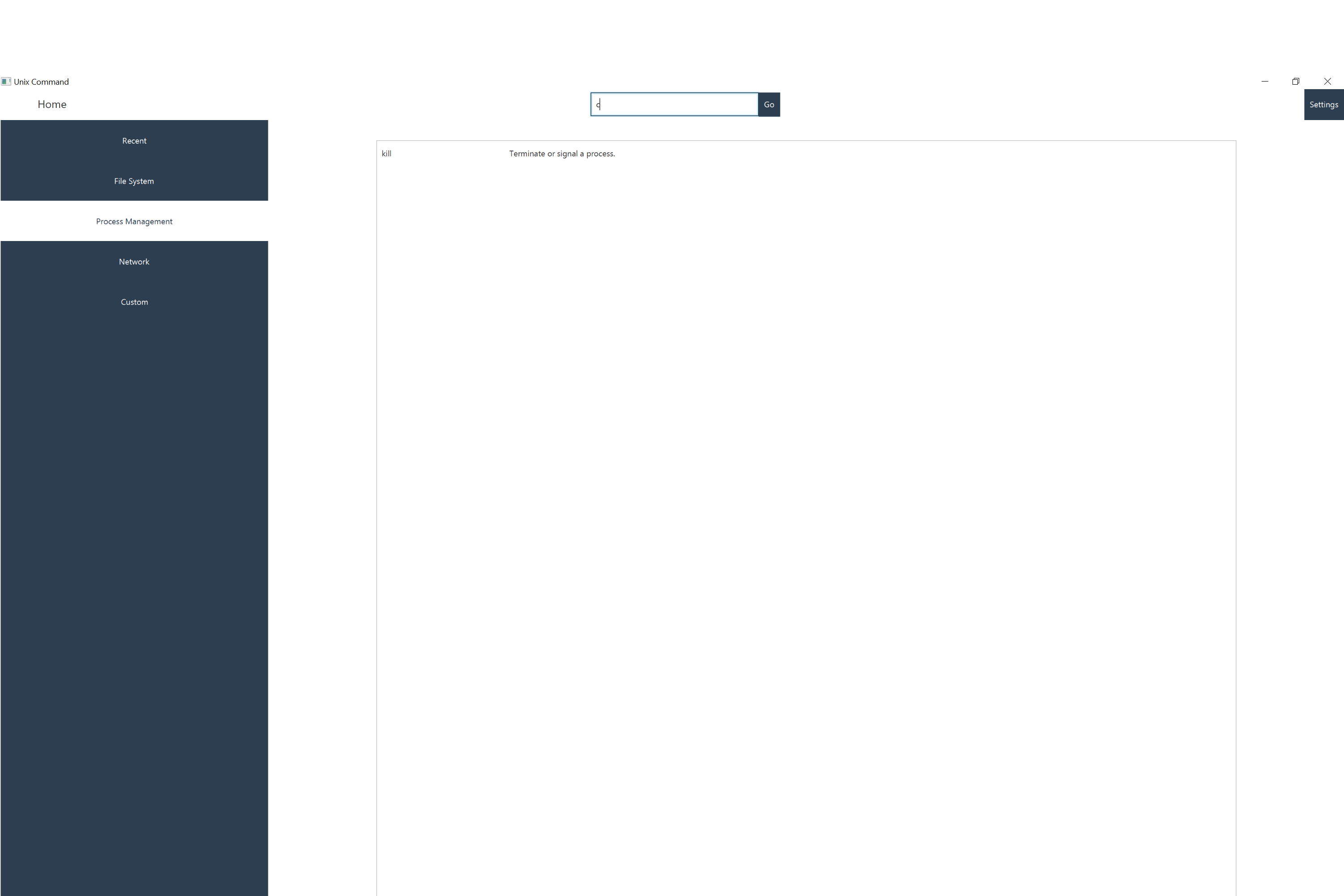
This is the main screen, showing the File System category selected. On the right, the list of commands for that category.



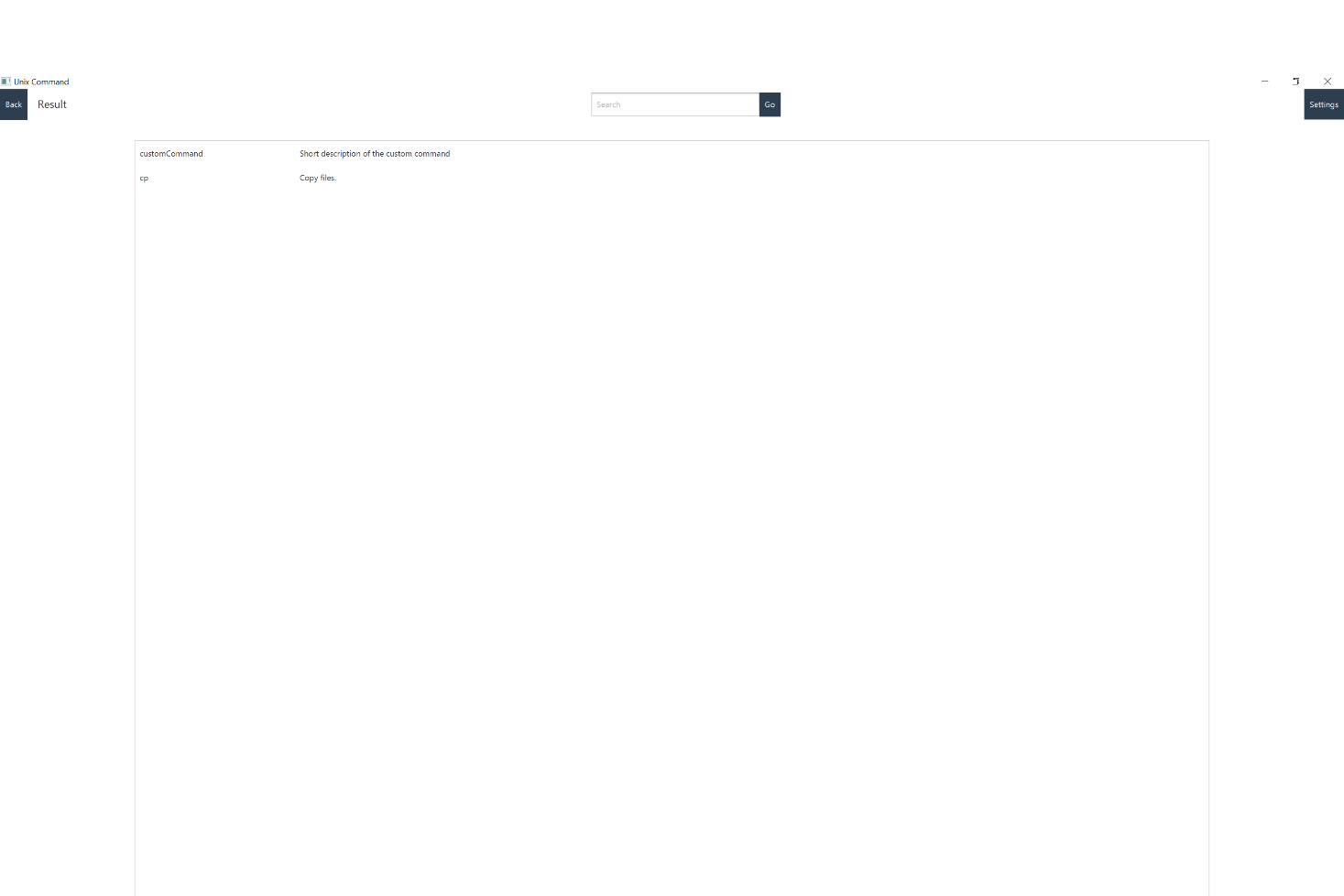
On this screen, on the left, the list of all the commands in the same category is displayed, and on the right, the details of the selected command is shown.



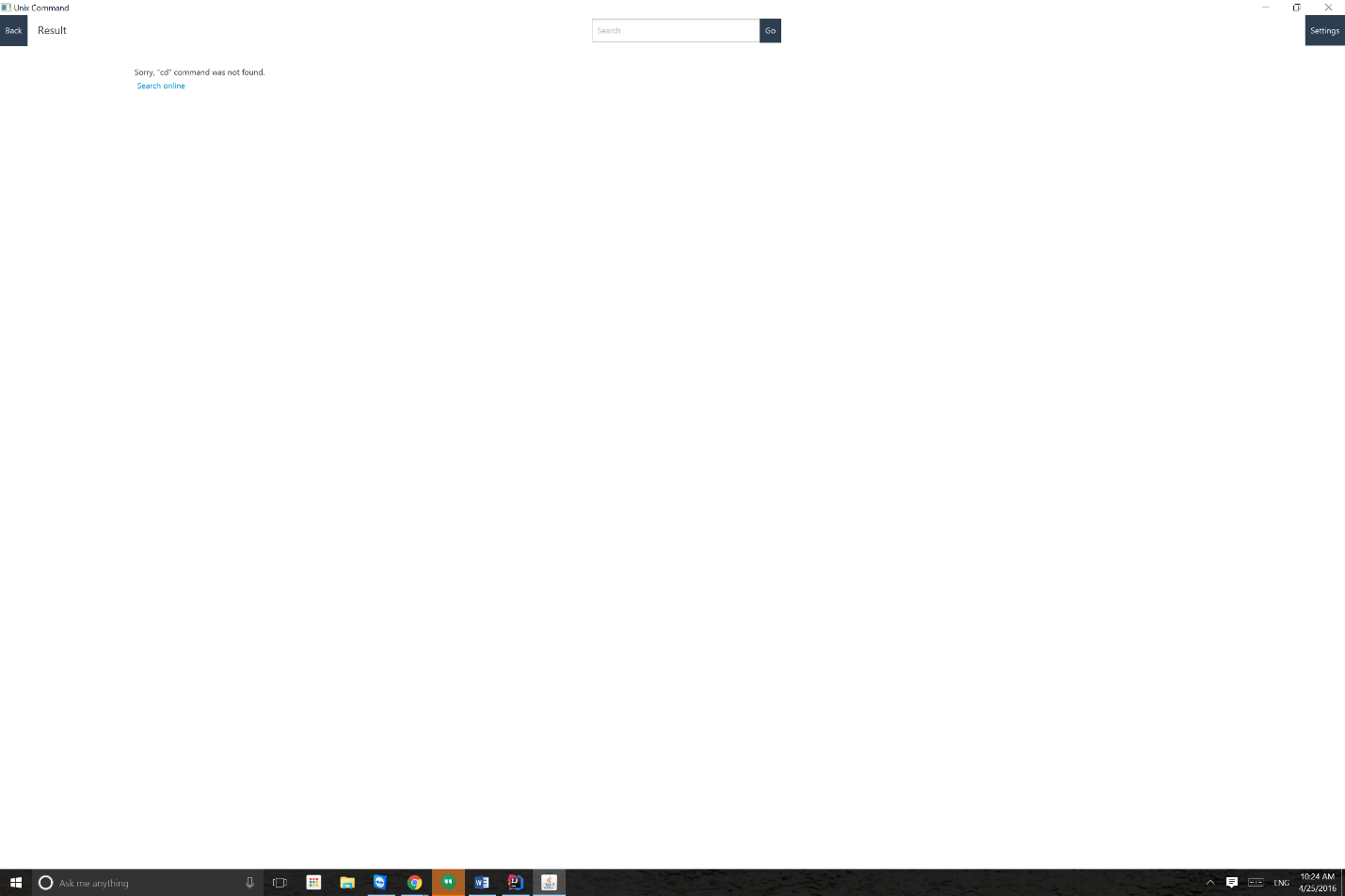
This shows the screen as the user types a command to be searched.



This screen shows the result when there are multiple commands found form the searched



This screen is shown when no result were found from the search.



If the user clicks on search online link

