

OPERATING SYSTEMS LAB
XV6
Set#1
Internal Examination

Question (Shell History)

You have to modify the behaviour of xv6 shell to allow a user to :

- 1) blacklist certain programs from being executed using blacklist keyword, ,
- 2) display name of last program that was run when “8” key is pressed and enter is hit.

Specifically :

- Using the “8” key should print the last program that had been called, and successive calls to “8” keys should keep going backwards in history. This should allow the user to view last 20 commands at the maximum.
- A user can pass 5 program names of their choice, after typing blacklist keyword, that need to be blocked.
- If blacklist keyword is invoked, the user should be asked for a password and only on being provided correct password should the programs be blacklisted.
- You can assume any password or ask the user to set a password.
- These programs should not be parsed by the shell and suitable error message should be displayed if they are called.
- Unless the blacklist keyword has been run, all programs should be allowed to run normally.

Hint: You have to modify sh.c to store commands in some data structure for various purpose. You have to process these data stored in data structure to fulfil objective.

Submission: You have to make a report in txt format. The report should contain:

1. The steps to reach the objective(s).
2. The main source code (copy and paste)
3. Screen shots of output(s).