

**College of Engineering, Pune**  
**Dept of Computer Engineering and Information Technology**  
**Year (Final B.Tech)**  
**Advanced Unix Programming (AUP)**  
**Lab 7**

**Write a program to implement the following:**

- 1. “The child “exec” call inherits the file descriptors of parent if Close\_on\_exec is not set“. Demonstrate with an example**
- 2. Write a program that takes a file name as an argument, opens the file, reads it and closes the file. The file should contain a string with the name of another application (e.g., 'ls' or 'ps' or any of your own applications) and the program forks a new process that executes the application named in the file.**
- 3. Implement `cat < hw.txt > hw-copy.txt`**
- 4. Bob works for an auditing agency needs to be able to read all the files in the system. The system admin has to protect the integrity of the system and should not allow Bob to modify or delete any file. Write a special SETUID program for the admin so that he can give the executable permission of it to Bob. This program requires Bob to type a file name at the command line and then it will run `/bin/cat` to display the specified file. Can Bob compromise the integrity (by adding/modifying/deleting files) of this system? How?**