

LAB 5: To Learn **fork()** and **exec()** system calls and signal handling

Tutorial exercise

Modify Question 1 given in the Pre Tutorial exercise to incorporate the following:

- a) The program should be able to execute commands with two or more arguments. Use appropriate **exec()** command to achieve this.
- b) The main program **forks** two child processes: odd and even. These two child processes will execute the odd and even commands from the file respectively
 - i. Use only one file pointer for reading the file in the whole program
 - ii. Define a single function for executing commands which is called by odd/even process with appropriate arguments
 - iii. Make sure the program does not result in any orphan processes and also close all open file descriptors before program ends
- c) Use appropriate **signals** to make sure the odd and even process strictly alternate with each other. You can use some temporary data structure to store the file contents. Compare the output obtained with that in part b)