

Programming Tools - II  
LAB ASSIGNMENT for Week # 2

1. Write a C program to create a child process using `fork()` system call. Also use `wait()` system call in parent process such that it gets the return status of its child, return status must be printed on console.

Hint: Use (i) `WIFEXITED`  
(ii) `WEXITSTATUS`  
(iii) `WIFSIGNALED`

POSIX macros to print the exit status of child process.

2. Write a program in C to demonstrate Zombie processes.

3. Use fork-exec combination where child ***exec*** the new program while parent continue to execute the original code. The new program here is ***ls*** command with command-line argument ***-l***.

Extension: Execute your code from a directory that has lot of files ( e.g /etc) and execute ***ls -l*** command. What happens if you enter ***ctrl+c*** as soon as the listing start to display. Try to display the exit status of child process as it has been interrupted by ***ctrl+c***.