

Assignment for 3rd Year 1st Semester Students

IT/PC/B/S/313

GUIDELINES

1. Try to write a clean program with enough comments.
2. At the beginning of the file, use block comments to write details about name, roll no, assignment details, input required and output generated.
3. Also put the compilation [should be WARNING free] and execution sequence under the block comment.
4. The name of the file should be as per the following format.

 <Two Digit Team Number>_<Assignment Number>.sh
5. The type of the file should be pure plain ASCII Text.
6. The assignment files should be uploaded AS PER THE LAB SCHEDULE. Upload only required no of files. NOT A BIT MORE.
7. While coding, always use indentation of 4 spaces.
8. Blocks of code should be separated by a newline.
9. Always use command line argument handling to take inputs.
10. Duplicate assignments will incur penalties. [Marks will be allocated proportionally]
11. Not adhering to any of these guidelines will incur penalties.
12. For the description of any system/library call use man command.
13. Always use the 'perror' routine to check the return status of the system/library call.

ASSIGNMENT – 2 (IPC/SYNCHRONIZATION)

A. SIGNAL Handling

(4 Marks) [CO3]

Catch the signal 'SIGINT' and display "Ha Ha, Not Stopping". Use 'signal' system call. Always use "perror" to check the return status of a library/system call.

B. IPC using Named Pipe (FIFO)

(6 Marks) [CO5]

Create two processes, named Proc1 and Proc2. Transfer 1GB file from Proc1 to Proc2 using a FIFO. Now, transfer the same file from Proc2 to Proc1 using another FIFO. Now, compare the two files to make sure that the same file has returned back. Also, print the time required to do this double transfer. Attach this output to the source file as a comment.

To create FIFO, you can either use shell command or system call.

To create a large file you can use the relevant command.

Use 'ls -l' command to show the FIFO and the large file. Attach this output to the source file as a comment.

Make sure that the starting comment block has all the necessary information attached.