

University of Dhaka
Department of Computer Science and Engineering
CSE 3113: Operating Systems Lab

Assignment Code: SH – 01

Assignment Title: Writing a Shell

Date of Assignment: 23/01/2017 and 25/01/2017

Last Date of Submission: 29/01/2016 and 31/01/2017

Objectives:

- I. Write a Shell that does the following:
 - a. Accept commands from keyboard
 - b. Execute the input command
 - c. Display the output in the console
- II. Upgrade your shell to use Pipes and I/O redirection
- III. Upgrade your shell to use the following Shell Builtins:
 - a. cd
 - b. echo
 - c. exit
 - d. help
 - e. pwd
- IV. Bonus: Upgrade your shell so that it can use background processes.

Marks:

- 1) Solving problem I will net 60% marks.
- 2) Solving problem II will net 20% marks.
- 3) Solving problem III will net 20% marks.
- 4) Solving bonus problem IV will net 25% marks but is only applicable for those who have solved problems I, II and III.

Deliverables:

- 1) A single or multiple files of readable codes written in C with extension .c.
- 2) A shell script file containing necessary scripts for successfully running the code in any standard machine with Linux OS and GNU compiler. The shell script file should be sent with extension .sh.

The deliverables are to be sent in a single compressed package by email. The compressed filename must be of the format: [Roll No.]_[Assignment Code].

Submission Format:

The assignment must be submitted by email. The email must have the following formatting.

Subject: [Assignment Code] [Assignment Name] [Roll No]

Body: Assignment Code

Assignment Name

Roll No.

Date of Assignment

Date of Submission

Attachment: A single compressed file containing the code(s) and the shell script file. The compressed filename must be of the format: [Roll No.]_[Assignment Code].

Example Format:

Subject: [SH – 01] [Writing a Shell] [SH – 017]

Body: Assignment Code: SH – 01

Assignment Name: Writing a Shell

Roll No. SH – 017

Date of Assignment: 23/01/2017

Date of Submission: 29/01/2017

Attachment: SH-017_SH-01.tar / SH-017_SH-01.zip

Penalty:

- 1) **Plagiarism:** If it can be proven beyond reasonable doubt that the assignment code(s) was plagiarized, the code will be invalid and no marks will be attributed.
- 2) **Late Submission:** Failure to submit the assignment on time will result in 50% cumulative reduced mark which will be activated each week after the original submission date has passed.