IT Workshop - 1
Assignment - 1
Due on - 17th September 2017, 9pm

Submission Format:

- Use 'script' command to record commands / output in a file **MyLogs.log** when you do the below mentioned exercises. You also need to submit text file named **answers.txt** containing commands which you used to solve the stated problem. The final script output file and the text file has to be uploaded on moodle website.

- If you have created multiple script files then append all of them together and upload one single script file only.

- Write each command in a new line.

- Leave the line empty for unattempted commands.

- **All questions need to be solved using one command. Commands separated by ; or && is not a single command and will not be given marks.**

- **"PLAGIARISM WILL BE PENALISED". Do not copy script logfiles or answers from a friend.**

Upload Format:

1. Create a directory <RollNo>. (With your roll number)

2. Add answers.txt and MyLogs.log to this directory.

3. Zip the directory in **.zip** format and upload it on moodle as <RollNo>**.zip**.

Questions:

1. Create a directory 'Assignment1'.
2. Go inside the directory 'Assignment1'.
3. Create directories 'a', 'b', 'e', 'f' using single command where 'a', 'b' are inside directory 'Assignment1' and 'e' is inside 'b' and 'f' is inside 'e'.
4. Go inside directory 'a'.
5. List all the files and folders(not hidden files) in **your** home directory in long listing format and store the output in a file named 'file.txt' in the current directory.
6. Rename 'file.txt' to 'file1.txt'.
7. Copy 'file1.txt' to directory 'f' with filename as 'file2.txt'.
8. Get the fifth field(column) of the content of the file 'file1.txt' separating each field by space and display all the unique values. (Hint: you will need to replace multiple spaces by a single space).
9. Go inside directory 'f' in single command.
10. Display the path of your working directory.
11. Go back to the **previous** working directory.
12. Change the timestamp of 'file1.txt'.
13. Go back to the parent directory.
14. Create a file 'file3.txt' in the current directory with at least 20 lines (without using vim or any other text editor).
15. Display the first 10 lines of 'file3.txt'.
16. Display the lines from 7 through 15 of 'file3.txt'.
17. Count the number of words in 'file3.txt'.
18. Print "hello world" on terminal.
19. Display the path to the binary file of `ls`.
20. Display the last 5 commands you ran on terminal.
21. Create 5 empty files: lab1.txt, lab2.txt, lab3.txt, lab4.txt, lab5.txt in a single command.
22. Rename the above files to lab1.c, lab2.c, lab3.c, lab4.c, lab5.c in a single command.
23. List the content of your directory in a tree-like format.
24. List the content of your current directory in long list format sorted by modification time.
25. List the content of your current directory in long list format sorted in increasing order of file size.

26. Display all files and folders inside directory 'Assignment1' up to two levels of depth such that full path is displayed for each file/folder with respect to current directory.

27. Display all '.txt' files inside directory 'Assignment1' such that full path is displayed for each file/folder with respect to current directory.

28. Clear the terminal.

29. Find out the name of current user logged in.

30. Check if server "intranet.iiit.ac.in" is on-line.

31. SSH to your mirage account (server address: mirage.iiit.ac.in, username and password are same as your web or researchweb accounts).

32. Find out who else is logged in to mirage at that time.

33. Create an empty file named 'server.txt' on the mirage server.

34. Close the SSH session and get back to your home folder on the local machine.

35. Get only process_ids of all running processes and save it in file 'pid.txt'.

36. Show directory's free space usage in human readable format of the current directory.

37. Count the number of words there in the dictionary which have "work" as a substring. (Hint: There is a dictionary file in the system)

38. Copy 'Assignment1' and all its contents to the home folder on your mirage account.

39. Compress the folder 'Assignment1' and save the output as Assignment1_RollNumber.tar.gz (Where "RollNumber" is your IIIT roll number).

BONUS QUESTIONS (carry extra marks)

1. Display the name of your Operating System. (Hint: use command for system information)

2. Display the calendar for 2017.

3. Display todays date in the format 'yyyy-mm-dd'.

4. Send "hello world" message to every online user on mirage.

5. Generate all the multiples of 8 from 0 to 1,00,000 and find the number of integers that do not have the digit 6, but do have the digit 4 or 5. (do this in one command)

6. Write a command to find the current IPv4 / IPv6, Broadcast address and subnet mask of the ethernet connection of your computer.

7. Automatically retrieve all files modified on that day and back them up to different location.

8. Retrieve all files modified last week and replace the phrase "this week" with "next week" in those files.

9. Merge fives sets of user lists into a single one.