

## Lab: Files

This lab session is on file handling in Python. At the end of the session, you will be able to apply various file manipulation functions/methods to solve some file-related problems.

### Activity 1: Recap

- Take a moment to recap the lecture material on files.
- Recall our discussion on the **chmod** Linux command. Play around with the command.

### Activity 2: Problem solving

1. Write a program to display the contents of a specific file. Handle possible exceptions.
2. Write a program to add your name and enrollment number to the end of the previous file.
3. Write a program to display the total number of lines in a file. How about number of words?
4. Write a program to display the first N lines of a file. N is a user-supplied number.
5. Write a program to copy the contents of a file named `source.txt` to another file named `destination.txt`.
6. Assume a file named `marks.txt` has the following content of student's name, CA and final exam marks respectively.

|       |    |    |
|-------|----|----|
| Dorji | 30 | 25 |
| Pema  | 40 | 30 |
| Karma | 50 | 35 |

Write a program that reads the file, calculates the total mark (i.e CA + final) for each student and saves the total mark for each student in a file named `TotalMarks.txt`.

7. Save the contents of a given file in reverse order (i.e. last line becomes first line) in a file named `Reversed.txt`.
8. Use Python to do the following (in one program): create a directory named `myDirectory`, create a file named `myFile.txt` inside the directory, and change the permissions of this file so that only the owner (user) can read and write.
9. Define a function named `Eureka()` that searches for a particular word in a file and displays "Bingo" if the word is found in the file, "Not found" otherwise.
10. How would you remove a particular line from a given file (using Python)?