Problem Solving & Coding – Level I
[Language Foundations]
(File I/O)

Solve the following problems using computer with help of Python/C++/Java/C# language as means of communication.

Problem 1: Head of File

Unix-based operating systems usually include a tool named head which displays the first 10 lines of a file whose name is provided as a command line parameter. Create a function named *head* that takes filename as input and returns the list of first 10 lines.

Write a main program to demonstrate your function.

Problem 2: Number the Lines

Create a function named *numberLines* that takes two filenames(first one for input, second one for output) as input and reads the lines from input file, adds line numbers to each line before writing it to an output file. Each line in the output file should begin with the line number, followed by a colon and a space, followed by the line from the input file.

Write a main program to demonstrate your function. The names of the input and output files are provided by the user.

Problem 3: Remove Comments

Python uses the # character to mark the beginning of a comment. The comment ends at the end of the line containing the # character. In this exercise, Create a function named *removeComments* that takes two file names(python source filename and output filename) as input and removes all of the comments from the source file. Your logic should check each line in the file to determine if a # character is present. If it is then your program should remove all of the characters from the # character to the end of the line, save the modified line in the output file. If it is not then your program must save the line in the output file without any modification.

Write a main program to demonstrate your function. The names of the input and output files are provided by the user.