Class Exercise:

Subprocess v2

In this exercise, you will create a Python class that utilizes the subprocess module and the **Popen** function to create a simple file compression tool. The class will provide methods to compress and decompress files using the popular compression tool called "gzip." The gzip command-line tool will be executed using the **Popen** function from the subprocess module.

Your task is to implement the **FileCompressor** class, which should have the following methods:

1. **compress\_file(input\_file, output\_file)**: This method takes an input file path and an output file path as parameters. It compresses the input file using the gzip command-line tool and saves the compressed file to the specified output file path.
2. **decompress\_file(input\_file, output\_file):** This method takes a compressed file path and an output file path as parameters. It decompresses the input file using the gzip command-line tool and saves the decompressed file to the specified output file path.

Note: Ensure that the gzip command-line tool is installed on your system before attempting this exercise. You can check if it's installed by running the command gzip --version in your terminal or command prompt.

Instructions:

import subprocess

class FileCompressor:

    @staticmethod

    def compress\_file(input\_file, output\_file):

# Your code here

    @staticmethod

    def decompress\_file(input\_file, output\_file):

# Your code here

# Example usage

compressor = FileCompressor()

# Compressing a file

compressor.compress\_file('input.txt', 'compressed.gz')

# Decompressing a file

compressor.decompress\_file('compressed.gz', 'decompressed.txt')

Expected output:

Assuming the content of the input.txt file is "Hello, World!", the output will be as follows:

Compressing a file:

input.txt is compressed using the gzip command-line tool.

The compressed output is saved in the file compressed.gz.

Decompressing a file:

The compressed.gz file is decompressed using the gzip command-line tool.

The decompressed output, which is the original content of input.txt, is saved in the file decompressed.txt.