System Assumptions:

1. All the URLs to Download from will be read from a text file located in a folder. File Name and the location value is configurable.

2. In my implementation the file storing the URLs is located at E:\DownloadFilesOutput\URLFolder and the file name is "UrlInformation.txt".

3. The URLs in this file are separated by a line break.

4. The files after being downloaded are stored in a location E:\DownloadFilesOutput\DownloadedFiles which I have used for my solution. This again is configurable.

5. The logs for the software generates a text file for each day. The text files are stored in a configurable location. In my solution log files are saved at E:\DownloadFilesOutput\Logs

6. Configuration files.  
    a. There are three configuration files. appsettings.json- This file tells the environment in

which you are running the software. "Environment" variable in this file can have two values: Testing & Production.

    b. appsettings.Production.json - Contains configuration values required for the software

run in the production environment.

    c. appsettings.Testing.json - Contains configuration values required for the software run

in the testing environment.

7. Download FileNames: Download file name is taken from the download URL itself and will be

composed of the last 100 characters (including) the extension of the file name after the

last backward slash. The filename length is configurable.

8. Configuration value explanation:

**FileDownloadLocation** - The folder location where the downloaded files will be saved.

**UrlInformationFile** - Path of the file containing URLs from which files can be

downloaded. Multiple URLs are separated by a line break.

**MaximumRetry** - Maximum number of retries to be done for downloading a file in case

any exception occurs in the first try.

**TimeGapBetweenRetires** - Time delay in seconds between multiple retires for a file

download.

**BlockSizeForDownload** - Block size in bytes taken for downloading a file.

**MaxFileNameLength** - Maximum length of the file that is getting downloaded.

**FtpUserName** - Username for the FTP login

**FtpPassword** - Password for the FTP login

**pathFormat** - Folder location where the log file will be created. One file per day is

created for the logs.

9. For logging, I am using Serilog package. This feature can easily be expanded and can merge

log files from different servers and can give a consolidated report of the logs.

10. In case a file exits in the download location and the software is trying to download it again,

then I am overwriting the file.

11. I have also attached my sample, UrlInformation.txt file with this email and also with the

software. The file does not contain any FTP URLs as I set up the FTP server locally in

my machine, hence I have removed the URLs from the input file.

12. Steps to run the program:

  a. Provide correct value for the key "Environment" in the appsettings.json file. Value can

either be "Testing" or "Production".

    b. Provide an entry for the key "FileDownloadLocation" and create a valid folder in the

path mentioned here in the appsettings.{Environment}.json file.

    c. Provide a valid URL file path value for the key "UrlInformationFile" in the

appsettings.{Environment}.json file.

Thanks.