COMP-8567
Assignment 05
Due Date: Dec 04, 2022, 11.59pm

Read the Linux manual for commands **find and tar** and write a Bash script, call it   **organize**,   to   collect and copy files, from a target directory hierarchy, with specific extensions, into a number of **tar** files, to be saved in a destination directory.

Synopsis:
organize [-t tarDir] [-o orgDir] <extensionList>

organize should use command **find** to visit each file in the hierarchy, defined by the root directory **tarDir**, and if their extensions are in **extensionList**, the files are copied to the directory **orgDir**, where each group of fs with the same extension are tared to a single file called, **extensionName.tar** (e.g. **doc.tar**) then deleted (only **tar** files are to remain).

Additional Rules:

When **orgDir** is missing, then directory **orgDir** should be created in current directory (PWD) and used for tar files.

When **tarDir** is missing, then current directory (PWD) should be used as target directory.

The script should check if **orgDir** exists (when provided) and if it has write permission. Otherwise, your script should exit with an error message.

   · Since command **find** might find multiple files with the exact same name and extension in different sub-directories of the hierarchy, your script should first check if the same name already exists in **orgDir**,

in which case you should add _1 or _2, etc. to the destination file name resulting from the copy.

Below are some sample runs:

Example 1:

$ organize -o ~/save txt doc

//Note: -t tarDir is not listed, and therefore the PWD should be assumeD as tarDir

Searches all files whose extensions are either **txt** or **doc** in the whole directory hierarchy (root is current directory, that is, .), creates ~**/save** if it does not exist already, then copies all these files to ~**/save** (make sure same-name files are copied properly). Then, all **txt** filesare tared as **txt.tar** and all **doc** files are tared as **doc.tar**.

Example 2:

$ organize pdf doc txt

//Both -t tatDir and -o orgDir are not listed

Searches all files whose extensions are either **pdf**, **doc** or **txt** in the directory hierarchy (root is **.**), creates **orgDir** then copies all these files to it and tar them accordingly.

Submission:

Submit a single file **organize.sh**