Programming Assignment #2

Due Date: 13th September, 2022

Total Marks: 30

1. Write a bash script to back up files.

Preparation

i) Create a file and type in it the list of files (in your home directory) that you want to back up.
ii) Create a directory in which you will store the backed up files.

Script

- **Script Name:** backup.scr
- **Arguments:** A filename and a directory. The filename holds the list of the files that should be backed up. The directory is where the backed up files should be stored.
- **Validation:** The minimum validation requirements are:

  - Ensure exactly 2 arguments are entered.
  - Check the first argument in the name of a file that exists.
  - Check that the second argument is the name of the directory that exists.

- **Body Section:** Create backup files for all files listed in the first argument. The backup files should have the same name as the original file with the extension .bak. They should be copied to the directory given as the second argument.

Testing the Script

i) Test the script with no arguments.
ii) Test the script with one argument.

iii) Test the script with 3 arguments.
iv) Test the script with two arguments in which the first one is not the name of a file.
v) Test the script with two arguments in which the second one is the name of a file rather than a directory.
vi) Test the script with the name of the file and the name of the directory you created in the preparation section.

Testing the Effect of the Script

i) Check the contents of the directory to be sure that the files are copied.

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2. Write a PERL script to generate a randomized string generator from a given alphabet. The script takes an alphabet, count and length parameters as input. The strings are generated according to the following rules:

- The string shall have a length no more than the specified length.
- There may be any number of same character substrings. However, at no time the length of such a substring may exceed the count. So with count 4 and with alphabet a, b we may have any number of character strings like a, aa, aaa, b, bb, bbb appearing anywhere in the final string.
- There are two random number generators. The first one determines the character to be repeated and the second one determines the number of times it is repeated.

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