**Python Assignment**

1. Reading and writing to following file types.
   1. CSV file
   2. Xlsx file
   3. Text file
   4. PDF file
2. Search and Replace pattern in text and .xlsx file, patterns should be as below.
   1. Search pattern -> containing one word only
   2. Search pattern -> containing multiline pattern (minimum 3-5 lines)
   3. Search Pattern -> containing special characters (minimum 5-7 different characters) (Should include one of these characters -> {|, ^, &, +, -, %, \*, /,=,!,>}
3. Script for password generation according to user following needs.
   1. Only numbers
   2. Numbers + special characters
   3. Number + Special Characters + Small case and Upper-Case characters
4. Check the strength of password entered by user, strength should have four categories. If the password is not strong then suggest the password using the some of the character entered by user in the first place.
   1. Low strength
   2. Medium Strength
   3. Strong
   4. Very Strong
5. The input xlsx file is as follows.

|  |  |  |  |
| --- | --- | --- | --- |
| Operation | First data | Second data | Output |
| + | 10 |  |  |
| Subtraction | 20 |  |  |
| \* | 40 |  |  |
| division | 30 |  |  |

Now take the input from the user for “second data” column and calculate the output as accordingly.

i.e., If operation is +, first data: 10 and second data: 20 then all columns will be like this.

|  |  |  |  |
| --- | --- | --- | --- |
| Operation | First data | Second data | Output |
| + | 10 | 20 | 30 |

And update the xlsx file (for user “second data” and the “output” column

1. Do the Following replacement of string in xlsx file.

|  |  |  |
| --- | --- | --- |
| One line | multiline | Special character |
| “You look great today” | “Hey how are you?  You look different today” | How many different characters do you know? ~,!,@,#,$,%,^,&,\*,(,),\_,=,+,:,.,”,/,\,| |

* 1. Replace the “You look great today” with “You look nice today”
  2. Replace “Hey how are you?

You look different today” with

“Hello

How are you doing?”

* 1. Replace (How many different characters do you know? ~) with character A
  2. Replace (How many different characters do you know? ~,!) with character B
  3. Like do this with each character replacing with C, D, E onwards for each character.

1. Make one dictionary for python, with the following features.
   1. By giving keywords as an input, it gives the use case example and syntax for it.

i.e. if input is given as “for” then python script should give output like.

Keyword – For loop

Description – This is basically a loop, the iteration how many times this will execute is depends on the starting and ending point of the index.

Example -

for i in range(25,29):

print(i)

* 1. Have as many commands/keywords as possible minimum 20 commands, which is used mostly in any python scripting.

1. File renaming tool in python, based on list, here the names inside “file\_to\_be\_renamed\_list.txt” should be replaced with the “renamed\_file\_list.txt” when we run script.
   1. “file\_to\_be\_renamed\_list.txt” contains followings.

mika.csv

xyz.txt

qwerty.xlsx

utiamc.sv

* 1. “renamed\_file\_list.txt” contains followings.

milkha.csv

abc.txt

asdfg.xlsx

namamc.sv

1. Make Calculator in python GUI, to have functions like following.
   1. Up to 3-fraction point Binary addition, subtraction, multiplication and division.
   2. Conversion from and to from binary, decimal and hex and octal numbers.
2. Track your time with python for everyday tasks. It should also store the data in one excel file for reference afterward. Sheet format is defined as below.

Every entry should be done by script by taking input from user and maintaining the sheet, try to

minimize the effort needed from user to input each entry.

Learn from this sheet data that how you are using your time and where and improve yourself.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Task** | **Start Date** | **Start Date Time** | **End Date** | **End Date Time** | **Total Time** | **Priority** | **Task size** | **Task Lable** | **Task Complexity** | **Status** |
| A | 9/27/2021 | 13:20 | 9/27/2021 | 14:20 | 1 Hour | Normal | Small | Work | Low | Done |
| B | 9/27/2021 | 13:20 | 9/28/2021 | 14:20 | 1 Day and 1 Hour | Medium | Medium | Personal | Medium | Done |
| C | 9/27/2021 | 13:20 |  |  |  | High | Large | Professional | High | Pending |