FP5.0 Module-1 Project

Batch Name:	**Infosys FP5.0 Summer Internship 2018**
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Specifications :-

The project is to write a Python program that reads a text file, scrambles the words in the file on following rules and writes the output to a new text file:

- Words less than or equal to 3 characters need not be scrambled
- Don't scramble first and last char, so Scrambling can become Srbmnacilg or Srbmnailcg or Snmbracilg , i.e. letters except first and last can be scrambled in any order
- Punctuation at the end of the word to be maintained as is i.e. "Surprising," could become "Spsirnirug," but not "Spsirn,irug"
- Following punctuation marks are to be supported - Comma Question mark, Full stop, Semicolon, Exclamation
- Do this for a file and maintain sequences of lines
- Hint: use random module of Python for scrambling

Solution :-

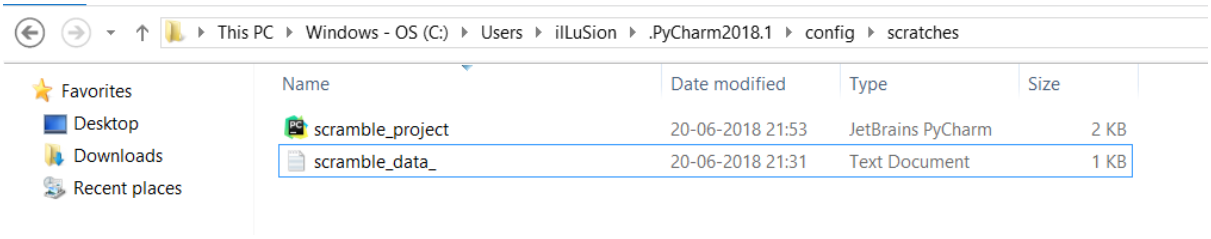
Scramble_Project.py

```
from random import randint

filename = input("Enter Input File : ")
with open(filename) as file:
    strings = file.read();
words = strings.split(" ");
symbols = [",", "?", ".", ";", "!", "'", '"', ":"]
output = filename.replace(".txt", "Scrambled.txt")
with open(output, "w") as file:
    file.write("");
for word in words:
    temp = word
    # Remove Punctuation Marks
    for symbol in symbols:
        if symbol in temp:
            temp = temp.replace(symbol, "")
    scrambled_word = temp
    if len(temp) > 3:
        while scrambled_word == temp:
            letters = [letter for letter in temp]
            arr = [0 for i in letters]
            arr[0] = 1
            arr[len(letters) - 1] = 1
            scrambled_word = []
            scrambled_word.append(letters[0])
            while 0 in arr:
                random = randint(1, len(arr) - 1)
                if arr[random] == 0:
                    scrambled_word.append(letters[random])
                    arr[random] = 1
                else:
                    continue
            scrambled_word.append(letters[len(letters) - 1])
            # Add Punctuation Marks
            letters = [letter for letter in word]
            for letter in letters:
                if letter in symbols:
                    scrambled_word.insert(word.index(letter), letter)
            scrambled_word = "".join(scrambled_word)

        with open(output, "a") as file:
            file.write(scrambled_word + " ");
    else:
        with open(output, "a") as file:
            file.write(word + " ");
print("Scrambled file created and written Successfully\nExiting Program...")
```

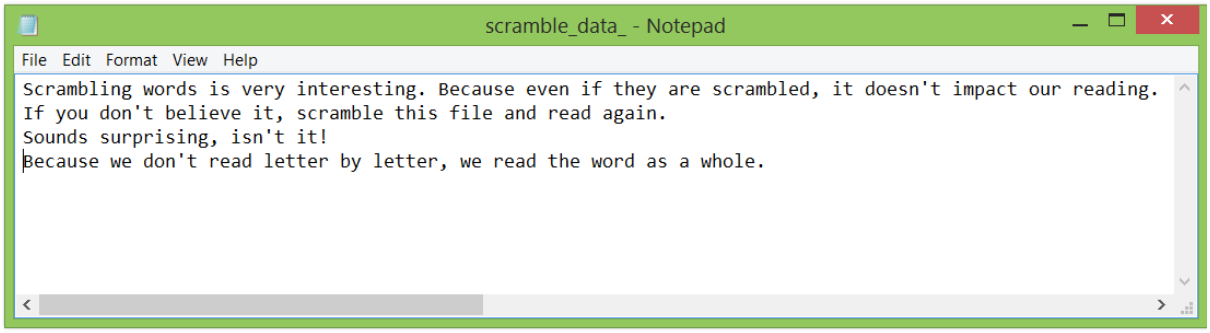
Snapshots :-

Directory Content: 1. scramble_project.py

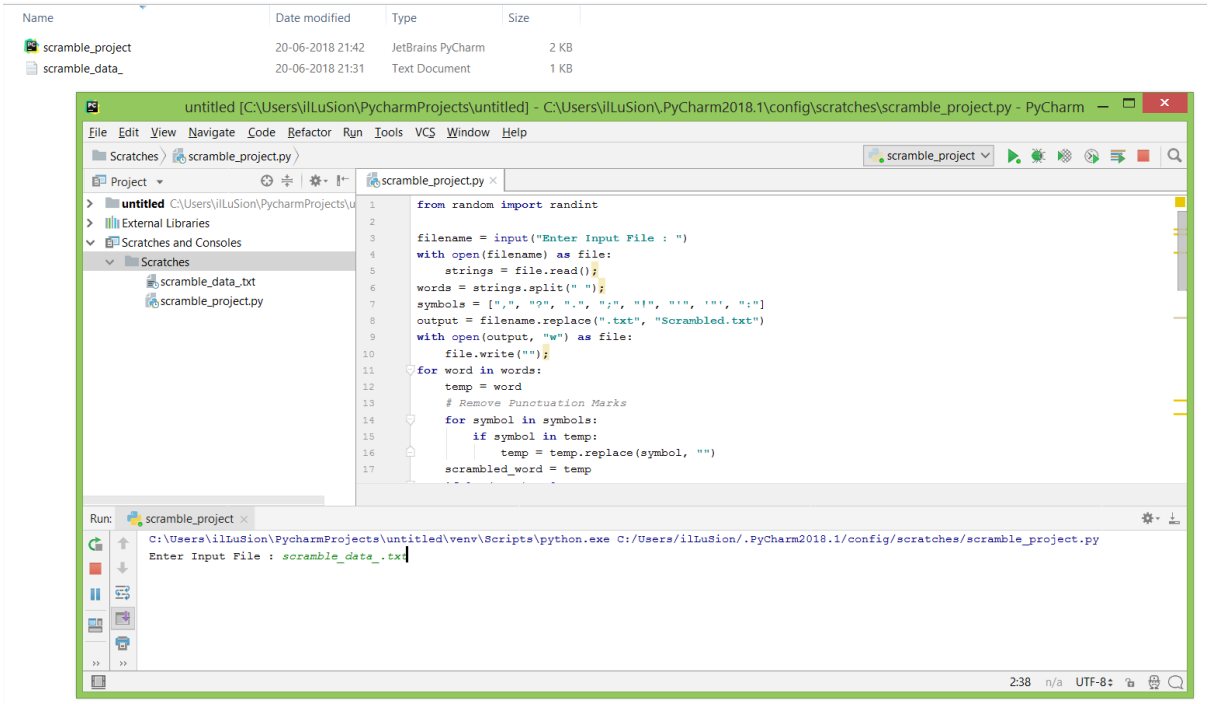
2. scramble_data_.txt



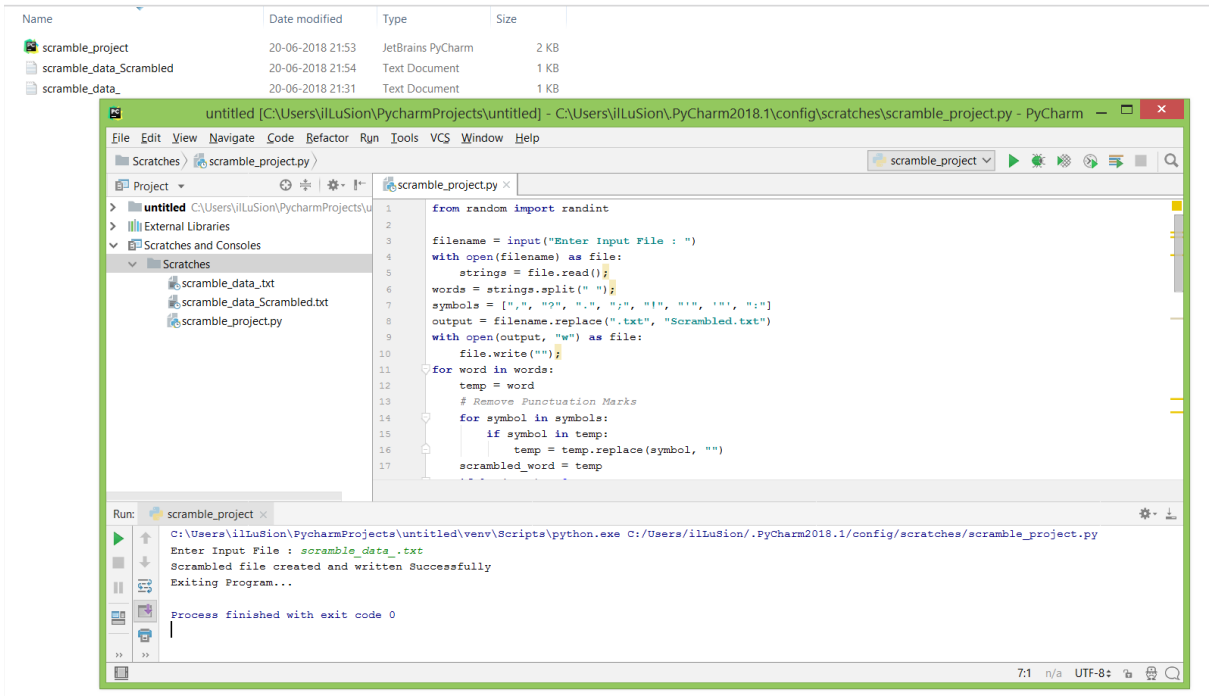
Input File: scramble_data_.txt



Execution Environment: Pycharm IDE with scramble_project.py editor



Execution Environment: Scramble Project Execution

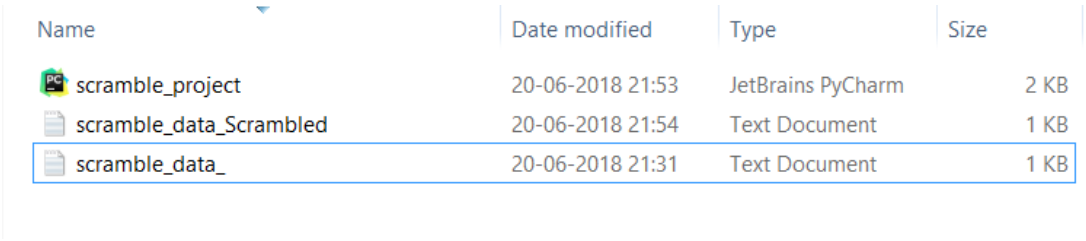


Execution Environment: Execution Result Display

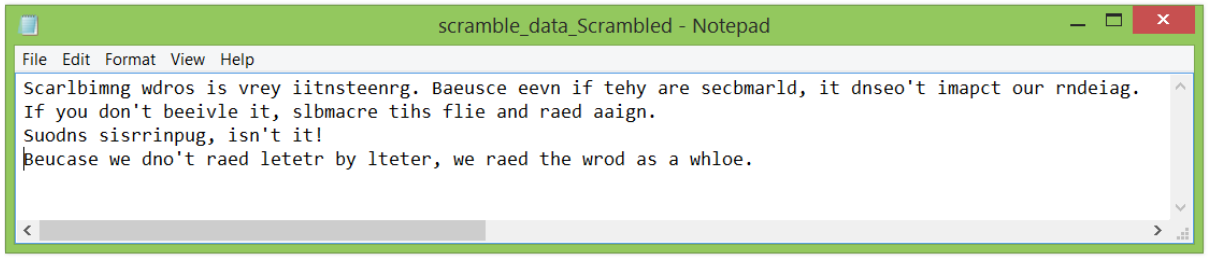
Directory Content (After Execution): 1. scramble_project.py

2. scramble_data_Scrambled.txt

3. Scramble_data_.txt



Output File: scramble_data_Scrambled.txt



****END OF PROJECT****