

Lab 05

OOP – BSDS

Note 1: Do your own work, talking, sharing, discussion is considered as cheating (in any case and strictly discouraged), therefore be careful. TA's will be there for your help. Wait for TA, if you have any query

Note 2: Do your best effort, partial marks will be given for your attempt

Instructions: If you think, you are comfortable with file handling and string manipulation, you may start task 1 directly, otherwise it is recommended to first run & understand "task00 to task 04". Also note down that you have to use the text files, therefore copy them in your system before starting tasks.

Task 1: Read file "sentences.txt", read sentences line by line. Rewrite the sentences into a new file name "small_sentences.txt" such that sentences should be in lower case letters (no upper case letter).

Task 2: There are three files "rollnos.txt", "names.txt", "cgpas.txt" having roll numbers, names & CGPA. Read record from three files and write into one file name "record.txt". You have to write each record in single line, you may use replace function to remove "\n" character from string:

```
string.replace("\n","")
```

Task 3: Read "number1.txt" and "number2.txt", use given code to get list of numbers from file. Both files have unique numbers, consider them as set. Perform following operations and write results into file:

- union of two sets
- intersection of two sets
- difference of two sets (the difference of two set is those element of set 1 which does not exist in set 2)

```
def count_numbers(line):
    count = 1
    for w in line:
        if w == ' ' or w == '\n':
            count += 1
    return count

def return_numbers_in_list(file):
    line = file.read()
    count = count_numbers(line)
    arr = [0] * count
    i = 0
    for w in line:
        if w != ' ' and w != '\n':
            arr[i] = arr[i] * 10 + (ord(w)-ord('0'))    #place numbers in the list
        else:
            i += 1
    return arr
```

Task 4: Write a function to print factors of a number. Call your function for 5-6 different values.

***** END OF LAB (Best of Luck) *****