

# Python OOP Assignment 2

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1. Write a single python program to do the following operations on a text file by writing different user defined functions.
  - a. Remove all the special characters.
  - b. Remove all single characters.
  - c. Substitute multiple spaces with single space.
  - d. Convert all the words into Lowercase.
  - e. Convert the words into literal form from their contracted form (e.g., Couldn't → Could not)

```
import re
```

```
def rem_special(s):  
    return re.sub("[^\w\s]", "", s)
```

```
def rem_singleC(s):  
    return re.sub("\s+\S\s+|\^\S\s+", "", s)
```

```
def rem_mulSpace(s):  
    return re.sub(' {2,}', ' ', s)
```

```
def lower_all(s):  
    return s.lower()
```

```
def to_literal(s):  
    s = re.sub("won't", "will not", s)  
    return re.sub("([a-zA-Z]+)n't", "\\1 not", s)
```

```
try:  
    f = open("1.txt", "r+")  
except Exception as e:  
    print(e)
```

```
s = f.read()  
funcs =  
{ 'a': rem_special, 'b': rem_singleC, 'c': rem_mulSpace, 'd': lower_all, 'e': to_literal }
```

```
while(True):  
    uin = input('a: remove special characters,\nb: remove single character words,\nc: remove redundant spaces,\nd: make lowercase,\ne: abbreviation to literal,\nAny other key to exit\nYour choice: ').strip()[0].lower()  
    func = funcs.setdefault(uin, "No such option, exiting")
```

```

if(isinstance(func,str)):
    print(func)
    del funcs[uin]
    break
else:
    print('\nBefore:',s,end='')
    x = func(s)
    print('After:',x,end='')
    f.seek(0)
    f.truncate()
    f.write(x)

    f.seek(0)
    print('File:',f.read())

```

```
f.close()
```

```

a: remove special characters,
b: remove single character words,
c: remove redundant spaces,
d: make lowercase,
e: abbreviation to literal,
Any other key to exit
Your choice: a

```

```

Before: I won't ,Use it.
After: I wont Use it
File: I wont Use it

```

```

a: remove special characters,
b: remove single character words,
c: remove redundant spaces,
d: make lowercase,
e: abbreviation to literal,
Any other key to exit
Your choice: b

```

```

Before: I won't ,Use it.
After: won't ,Use it.
File: won't ,Use it.

```

```

a: remove special characters,
b: remove single character words,
c: remove redundant spaces,
d: make lowercase,
e: abbreviation to literal,
Any other key to exit
Your choice: c

```

```

Before: I won't ,Use it.
After: I won't ,Use it.
File: I won't ,Use it.

```

```

a: remove special characters,
b: remove single character words,
c: remove redundant spaces,
d: make lowercase,
e: abbreviation to literal,
Any other key to exit
Your choice: d

```

```

Before: I won't ,Use it.
After: i won't ,use it.
File: i won't ,use it.

```

```

a: remove special characters,
b: remove single character words,
c: remove redundant spaces,
d: make lowercase,
e: abbreviation to literal,
Any other key to exit
Your choice: e

```

```

Before: I won't ,Use it.
After: I will not ,Use it.
File: I will not ,Use it.

```

```

a: remove special characters,
b: remove single character words,
c: remove redundant spaces,
d: make lowercase,
e: abbreviation to literal,
Any other key to exit
Your choice: f
No such option, exiting

```



```
client.close()
```

```
sp = SP()
ct = Thread(None,sp.client)
st = Thread(None,sp.server)
ct.start()
st.start()
ct.join()
st.join()
```

```
Client message 1
Server response 1
Client message 2
Server response 2
Client message 3
Server response 3
Client message 4
Server response 4
Client message 5
Server response 5
Client message 6
Server response 6
Client message 7
Server response 7
Client message 8
Server response 8
Client message 9
Server response 9
```