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# Assignment 6 :Error and Exception Handling
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'''
1.	Write a script for file handling using following function-
a.	center()
b.	b.repr()
c.	rjust()
d.	ljust()
e.	zfill()
f.	format()
g.	read()
h.	open()
i.	tell()
j.	seek()
k.	rename()
l.	remove()
m.	format()

'''
# File paths
file_path = "example.txt"
new_file_path = "new_example.txt"

# a. center()
text = "Hello"
width = 20
with open(file_path, 'w') as file:
    file.write(text.center(width))
```

```
# b. repr()
obj = [1, 2, 3]
with open(file_path, 'a') as file:
    file.write(repr(obj))

# c. rjust()
text = "World"
width = 10
with open(file_path, 'a') as file:
    file.write(text.rjust(width))

# d. ljust()
text = "Python"
width = 10
with open(file_path, 'a') as file:
    file.write(text.ljust(width))

# e. zfill()
num = 42
width = 5
with open(file_path, 'a') as file:
    file.write(str(num).zfill(width))

# f. format()
text = "Name: {}\n".format("John")
with open(file_path, 'a') as file:
    file.write(text)
```

```
# g. read()
with open(file_path, 'r') as file:
    content = file.read()
    print("File content:")
    print(content)

# h. open() - Not used here, as it's primarily for opening files which is done throughout the script.

# i. tell()
with open(file_path, 'r') as file:
    pos = file.tell()
    print("Current position:", pos)

# j. seek()
with open(file_path, 'r') as file:
    file.seek(5)
    pos = file.tell()
    print("Position after seeking:", pos)

# k. rename()
import os
os.rename(file_path, new_file_path)

# l. remove()
os.remove(new_file_path)
```

#OutPut

'''

File content:

Hello [1, 2, 3] WorldPython 00042Name: John

Current position: 0

Position after seeking: 5

'''

'''

2. Create a file and copy in another file

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'''
# Source file path (the file you want to copy from)
source_file_path = "source_file.txt"

# Destination file path (the file you want to copy to)
destination_file_path = "destination_file.txt"

# Create the source file and write some content into it
with open(source_file_path, 'w') as source_file:
    source_file.write("This is the content of the source file.")

# Open the source file for reading
with open(source_file_path, 'r') as source_file:
    # Read the content of the source file
    content = source_file.read()

    # Open the destination file for writing
    with open(destination_file_path, 'w') as destination_file:
        # Write the content of the source file into the destination file
        destination_file.write(content)

print("File copied successfully!")

#OutPut
'''
File copied successfully!
'''
'''
```

3. Open existing file and copy in binary file. Also check file is exist or not.

'''

```
import os

# Source file path (the existing file you want to copy from)
source_file_path = "existing_file.txt"

# Destination file path (the binary file you want to copy to)
binary_file_path = "binary_copy.bin"

# Check if the source file exists
if os.path.exists(source_file_path):
    # Open the source file for reading in binary mode
    with open(source_file_path, 'rb') as source_file:
        # Read the content of the source file
        content = source_file.read()

        # Open the binary file for writing in binary mode
        with open(binary_file_path, 'wb') as binary_file:
            # Write the content of the source file into the binary file
            binary_file.write(content)

    print("File copied successfully.")
else:
    print("Source file does not exist.")
#OutPut
'''
File copied successfully.
'''
```

'''

4. Create a file. Read the content from file and display on console with result of file – count number vowels, consonants, digit, special character.

```
'''
#Function to count the number of vowels, consonants, digits, and special characters
def count_characters(text):
    vowels = 0
    consonants = 0
    digits = 0
    special_chars = 0

    # Define vowels
    vowels_list = 'aeiouAEIOU'

    for char in text:
        if char.isalpha():
            if char in vowels_list:
                vowels += 1
            else:
                consonants += 1
        elif char.isdigit():
            digits += 1
        else:
            special_chars += 1

    return vowels, consonants, digits, special_chars

# Create a file and write some content into it
file_path = "sample.txt"
with open(file_path, 'w') as file:
    file.write("Hello World! 123 $#")

# Read the content of the file
with open(file_path, 'r') as file:
    content = file.read()
```

```
    print("File Content:")
    print(content)

# Count characters in the content
vowels, consonants, digits, special_chars = count_characters(content)

# Display the results
print("\nResults:")
print("Number of vowels:", vowels)
print("Number of consonants:", consonants)
print("Number of digits:", digits)
print("Number of special characters:", special_chars)

#OutPut
'''
File Content:
Hello World! 123 $#

Results:
Number of vowels: 3
Number of consonants: 7
Number of digits: 3
Number of special characters: 6
'''

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5. Write a program to read file line by line and store in array.

```
'''
# File path
file_path = "example.txt"

# List to store lines
lines_array = []

# Read file line by line and store in array
with open(file_path, 'r') as file:
    for line in file:
        lines_array.append(line.strip())  # Append the line to the array, removing trailing newline characters

# Display the lines stored in the array
print("Lines stored in the array:")
for line in lines_array:
    print(line)

#OutPut
'''
Lines stored in the array:
['Hello','bhai']
'''

'''
```

6. Write a program to read file line by line and store in variable.

```
'''
# File path
file_path = "example.txt"

# Variable to store file content
file_content = ""

# Read file line by line and store in variable
with open(file_path, 'r') as file:
    for line in file:
        file_content += line  # Append the line to the variable

# Display the file content stored in the variable
print("File content stored in the variable:")
print(file_content)

#OutPut
'''
File content stored in the variable:
THis is my world
Where we all humans live here.
Ok.
'''
'''
```

7. Write a script for file handling. Create three file a.txt and b.txt, c.txt. Write a content in file from user. After that copy this content in another file from user taken. Count content - number of line, number of words, number of blank spaces and display result in c.txt.

'''

```
# Function to count the number of lines, words, and blank spaces in a text
def count_content(text):
    num_lines = text.count('\n') + 1  # Counting the number of lines
    words = text.split()  # Splitting the text into words
    num_words = len(words)  # Counting the number of words
    num_blank_spaces = text.count(' ')  # Counting the number of blank spaces

    return num_lines, num_words, num_blank_spaces

# Create three files a.txt, b.txt, c.txt
files = ['a.txt', 'b.txt', 'c.txt']

for filename in files:
    with open(filename, 'w') as file:
        content = input(f"Enter content for {filename}: ")
        file.write(content)

# Copy the content from one file to another
source_file = input("Enter the source file name: ")
destination_file = input("Enter the destination file name: ")

try:
    with open(source_file, 'r') as source:
        content = source.read()
        with open(destination_file, 'w') as destination:
            destination.write(content)
    print("Content copied successfully.")
except FileNotFoundError:
    print("One or both of the specified files does not exist.")
```

```
# Count the content in the destination file
try:
    with open(destination_file, 'r') as file:
        file_content = file.read()
        num_lines, num_words, num_blank_spaces = count_content(file_content)

    # Write the result in c.txt
    with open('c.txt', 'w') as c_file:
        c_file.write(f"Number of lines: {num_lines}\n")
        c_file.write(f"Number of words: {num_words}\n")
        c_file.write(f"Number of blank spaces: {num_blank_spaces}\n")

    print("Result written to c.txt.")
except FileNotFoundError:
    print("Destination file not found.")
```

#OutPut

'''

Enter content for a.txt: a

Enter content for b.txt: b

Enter content for c.txt: c

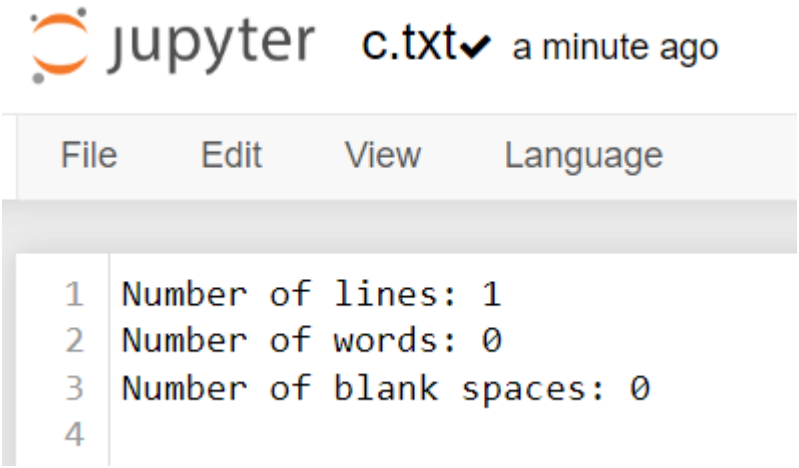
Enter the source file name: write.txt

Enter the destination file name: dest.txt

Content copied successfully.

Result written to c.txt.

'''



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