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

'''

```
# 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
'''

'''
```

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']

'''

'''

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

'''

File path file_path =

"example.txt"

6.

```
# 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.
'''
'''
```

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
```

7.

```
    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.

'''

'''