File handling and error handling in python

1.Opening file

```
file=open("/content/megha shree.txt","r")
```

```
file=open("/content/megha shree.txt","r")
content=file.read()
print(content)
file.close()
```

```
megha shree
cse branch
1st be
```

Writing a file

```
file=open("/content/megha shree.txt","w")
file.write("hello world!\n")
file.close()
```

Appending to a file

```
file = open("/content/megha shree.txt","a")
file.write("this is an appended line.\n")
file.close()
```

Using with statement

```
with open("/content/megha shree.txt","r") as file:
  content=file.read()
  print(content)
```

```
hello world!
this is Megha.
this is Megha.
this is Megha.
this is an appended line.
```

File handling modes

text mode ("t") vs binary mode("b")

```
with open("/content/KRISNA.jpeg","rb") as file:
  data=file.read()
```

ERROR HANDLINGS

TRY-except block

```
try:
  num=int(input("enter a number:"))
  print(10/num)
except ZeroDivisionError:
    print("you cannot divide by zero.")
except ValueError:
      print("Invalid input! Please enter a number.")
```

```
enter a number:5
2.0
```

FINALY block

```
try:"/content/megha shree.txt"
  file=open(,"r")
except FileNotFoundError:
    print("File not found.")
finally:
      print("Execution complete.")
```

```
Execution complete.
```

Raising exceptions

```
def check_age(age):
  if age<18:
    raise ValueError("age must be 18 or older.")
  return True
try:
  check_age(16)
except ValueError as e:
    print(e)
```

```
age must be 18 or older.
```

Creating a custum Exceptions

```
def check_positive(number):
  if number<0:
    raise ValueError("negative number entered.")

try:
  num=int (input("enter a positive number:"))
  check_positive(num)
  print("you entered a positive number.")
except NegativeNumberError as e:
  print(e)
```

```
enter a positive number:9
you entered a positive number.
```

count lines in a file

```
with open("/content/megha shree.txt", 'r') as file:
    # Use sum with a generator expression to count lines
    line_count = sum(1 for line in file)

print(f"The file contains {line_count} lines.")
```

```
The file contains 5 lines.
```

count words in a file

```
with open("/content/megha shree.txt", 'r') as file:
    # Initialize word count
    word_count = 0

    # Iterate through each line in the file
    for line in file:
        # Split the line into words and update the word count
        word_count += len(line.split())

print(f"The file contains {word_count} words.")
```

```
The file contains 16 words.
```

copy file content

```
with open("/content/megha shree.txt", 'r') as source_file:
    with open('destination_file.txt', 'w') as dest_file:
        # Read the contents of the source file and write it to the
destination file
        dest_file.write(source_file.read())

print("File contents copied successfully.")
```

```
File contents copied successfully.
```

random num generator

```
import random
random_number=random.randint(1,6)
print("the random num is :",random_number)
```

```
the random num is : 2
```

check if file exists

```python
from pathlib import Path

# Specify the file path
file_path = Path("/content/megha shree.txt")

# Check if the file exists
if file_path.exists():
    print("The file exists.")
else:
    print("The file does not exist.")
```

```
The file exists.
```