
11.FILES

1. Write a program to read text file
2. Write a program to write text to .txt file using `InputStream`
3. Write a program to read a file stream
4. Write a program to read a file stream supports random access
5. Write a program to read a file a just to a particular index using `seek()`
6. Write a program to check whether a file is having read access and write access permissions

< > + T

```
# 1st program...
a=str(input("Enter the name of the file with .txt extension:"))
file2=open(a,'r')
line=file2.readline()
while(line!=""):
    print(line)
    line=file2.readline()
file2.close()
```

... Enter the name of the file with .txt extension:



RAM



Disk



#2nd program...

import sys

def write_text_to_file(text, filename):

```
    with open(filename, "w") as f:
        f.write(text)
```

if __name__ == "__main__":

```
    text = "This is some text to write to"
```

```
    filename = "my_file.txt"
```

```
    write_text_to_file(text, filename)
```



+ <> + T



#3rd program...

```
def read_file_stream(filename):
```

```
    with open(filename, "rb") as f:
```

```
        data = f.read()
```

```
    return data
```

```
if __name__ == "__main__":
```

```
    filename = "my_file.txt"
```

```
    data = read_file_stream(filename)
```

```
    print(data)
```

```
b'This is some text to write to a file.'
```



+ <> + T

✓
0s

▶ # 4th program...

```
def read_file_stream_random_access(filename, position):  
    """Reads the contents of a file stream at a specified position.  
  
    Args:  
        filename: The name of the file stream.  
        position: The position in the file to read from.  
  
    Returns:  
        The contents of the file stream at the specified position.  
    """  
    with open(filename, "rb") as f:  
        f.seek(position)  
        data = f.read()  
    return data  
  
if __name__ == "__main__":  
    filename = "my_file.txt"  
    position = 10  
    data = read_file_stream_random_access(filename, position)  
    print(data)
```

b'me text to write to a file.'



main.py

Shell



```
1  # 5th program...
2  file_path = "sample.txt"
3  try:
4      with open(file_path, "rb") as file:
5
6          index_to_seek = 10
7          file.seek(index_to_seek)
8          data = file.read()
9          print(data.decode('utf-8'))
10 except FileNotFoundError:
11     print(f"The file '{file_path}' was
        not found.")
12 except Exception as e:
13     print(f"An error occurred: {str(e)
        })")
```



main.py

Shell



The file 'sample.txt' was not found.

> |



+ <> + T



6th program...

import os

def check_file_permissions(file_path):

"""

Checks whether the file at the specified path has read and write permissions.

Args:

file_path: The path to the file.

Returns:

True if the file has read and write permissions, False otherwise.

"""

is_readable = os.access(file_path, os.R_OK)

is_writable = os.access(file_path, os.W_OK)

return is_readable and is_writable

if __name__ == "__main__":

file_path = "my_file.txt"

if check_file_permissions(file_path):

print("The file has read and write permissions.")

else:

print("The file does not have read and write permissions.")



The file does not have read and write permissions.