

Random Access of Binary Files

- There are two ways of accessing a file
 1. **Sequential Access** - Read values in files one by one
 2. **Random Access** - We can go to any byte of file and read it
- Random access works for binary files as well for example

```
with open('my.data','wb') as f:  
    f.write(b'abcdefghij')
```

```
C:\Users\Abdul Bari\Desktop\MyPython>python BinWrite.py  
  
C:\Users\Abdul Bari\Desktop\MyPython>dir  
Volume in drive C is OS  
Volume Serial Number is 3E57-713D  
  
Directory of C:\Users\Abdul Bari\Desktop\MyPython  
  
03/25/2022  01:46 AM    <DIR>          .  
03/25/2022  01:46 AM    <DIR>          ..  
03/25/2022  01:46 AM                63 BinWrite.py  
03/25/2022  01:46 AM                10 my.data  
                2 File(s)                73 bytes  
                2 Dir(s)  418,479,534,080 bytes free  
  
C:\Users\Abdul Bari\Desktop\MyPython>type my.data  
abcdefghij  
C:\Users\Abdul Bari\Desktop\MyPython>
```

- Whenever a file is opened its **pointer** will be at index 0
- **tell()** method will tell you the **current position** of file pointer
- **seek()** is the method , which will **move the file pointer** to a certain given position in a file for example

```
with open('my.data','rb') as f:
    print(f.read(2).decode())
```

```
C:\Users\Abdul Bari\Desktop\MyPython>python BinRead.py
ab
```

- **Moving the pointer**

```
with open('my.data','rb') as f:
    print(f.read(2).decode())
    f.seek(3,0)
    print(f.read(1).decode())
```

```
C:\Users\Abdul Bari\Desktop\MyPython>python BinRead.py
ab
d
```

- Moving the pointer from current position

```
with open('my.data','rb') as f:  
    print(f.read(2).decode())  
    f.seek(3,1)  
    print(f.read(1).decode())
```

```
C:\Users\Abdul Bari\Desktop\MyPython>python BinRead.py  
ab  
f
```

- Moving the pointer from end of file

```
with open('my.data','rb') as f:  
    print(f.read(2).decode())  
    f.seek(-3,2)  
    print(f.read(1).decode())
```

```
C:\Users\Abdul Bari\Desktop\MyPython>python BinRead.py  
ab  
h
```