

File Positions indicators Functions

By : NoorHomaïd

First, we need to understand what dose each function do

- Tell : tells the current position (location) of the pointer.

not that tell function has no parameters

- Seek : allows you to seek to a position(location) in a file

It has parameters

When do we use Get or Put ?

Get	Put
Input files	Output files
Ifstream	Ofstream
When reading from a file Tellg - seekg	When writing to a file Tellp – seekp

Note :

when you're using **fstream** object : both **tellg** and **tellp** will give the same result

And also **seekp** and **seekg** will give the same results

Tellg and tellp
examples

Output file – tellp ()

```
8
9  #include <iostream>
10 #include <fstream>
11 using namespace std;
12 int main() {
13     ofstream noorfile;
14     noorfile.open("noor.txt");
15     if(noorfile.is_open()==true){
16         cout<<"File opened succsesfully "<<endl;
17         cout<<noorfile.tellp()<<" Pointer file position "<<endl;
18         noorfile<<"hello";
19         cout<<noorfile.tellp()<<" Pointer file position "<<endl;
20     }
21     else{
22         cout<<"file is not opend "<<endl;
23     }
24
25     return 0;
26 }
27
```

here it points to 0
why ?
bc we're still in the beginning of the file ,
we haven't wrote anything to the file
yet

now it points to 5
why ?
bc i wrote "hello" to the file
so the pointer stopped at
the end of my file (the
element in the file)

File opened succsesfully
0 Pointer file position
5 Pointer file position
Program ended with exit code: 0

Input file – tellg()

```
4 //
5 // Created by Noor Ali Alhomaidd on 24/08/1441 AH.
6 // Copyright © 1441 nooralialhomaidd. All rights reserved.
7 //
8
9 #include <iostream>
10 #include <fstream>
11 using namespace std;
12 int main() {
13     ifstream noorfile("noor.txt");
14     if(noorfile.is_open()==true){
15         cout<<"File opened succsesfully "<<endl;
16         cout<<noorfile.tellg()<<" Pointer file position "<<endl;
17         string a;
18         getline(noorfile,a);
19         cout<<" file contnont : "<<a<<endl;
20         cout<<noorfile.tellg()<<" Pointer file position "<<endl;
21
22     }
23
24 }
25 else{
26     cout<<"file is not open "<<endl;
27 }
28
29 return 0;
```

tellg() , input files

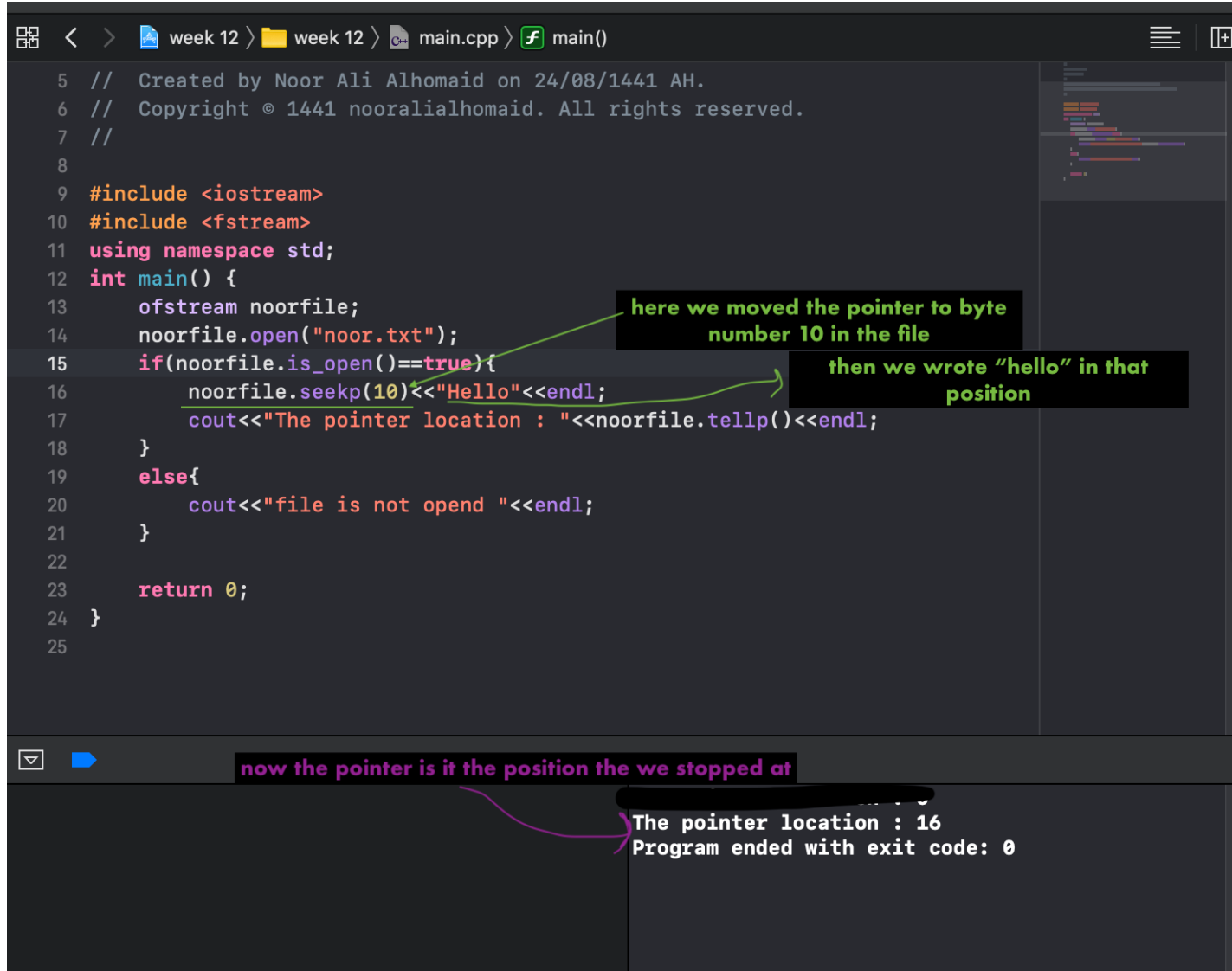
pointer will point to the beginning of the file which is 0

after reading what's in the file : the pointer now is pointing to end of the file (17)

File opened succsesfully
0 Pointer file position
file contnont : this is my file
17 Pointer file position
Program ended with exit code: 0

Seekg and seekp
examples

onput file – seekp()



The screenshot shows a C++ IDE with a file named `main.cpp` open. The code is as follows:

```
5 // Created by Noor Ali Alhomaidd on 24/08/1441 AH.
6 // Copyright © 1441 nooralialhomaidd. All rights reserved.
7 //
8
9 #include <iostream>
10 #include <fstream>
11 using namespace std;
12 int main() {
13     ofstream noorfile;
14     noorfile.open("noor.txt");
15     if(noorfile.is_open()==true){
16         noorfile.seekp(10)<<"Hello"<<endl;
17         cout<<"The pointer location : "<<noorfile.tellp()<<endl;
18     }
19     else{
20         cout<<"file is not opend "<<endl;
21     }
22
23     return 0;
24 }
25
```

Annotations in the image explain the `seekp` operation:

- A green arrow points from the text "here we moved the pointer to byte number 10 in the file" to the `seekp(10)` call on line 16.
- Another green arrow points from the text "then we wrote 'hello' in that position" to the `<<"Hello"<<endl;` part of the same line.
- A purple arrow points from the text "now the pointer is it the position the we stopped at" to the `tellp()` call on line 17.

The output window at the bottom shows the program's execution results:

```
The pointer location : 16
Program ended with exit code: 0
```


Input file – seekg()

```
main.cpp
main.cpp
week 12 > week 12 > main.cpp > main()
6 // Copyright © 1441 nooralialhomaaid. All rights reserved.
7 //
8
9 #include <iostream>
10 #include <fstream>
11 #include <string>
12 using namespace std;
13 int main() {
14     ifstream noorfile;
15     noorfile.open("noor.txt", ios::in);
16     if(noorfile.is_open() == true){
17         cout<<"Current position : "<<noorfile.tellg()<<"\n";
18         string a;
19         noorfile.seekg(2); will move the pointer ( to byte number 2 in the file (noor.txt)
20         getline(noorfile,a);
21         cout<<a<<endl; now it will print the file contents starting from position (2)
22         cout<<"Current position : "<<noorfile.tellg()<<"\n";
23         noorfile.close();
24     }
25     else{
26         cout<<"file is not opened "<<endl;
27     }
28 }
29
```

hello this is noor file

pointer has moved to the position (2)

pointer now points to the last position in the file (25)

```
Current position : 0
llo this is noor file!
Current position : 25
Program ended with exit code: 0
```

```
week 12 > week 12 > noor.txt > No Selection
1 hello this is noor file!
2 |
```

noor.txt file contents :