

## EEE102 C++ Programming and Software Engineering II

**Lab Practice 10****File Operation**

Notice:

- The aim of this lab is for you to become familiar with how to work with files.
- Practice with the exercises. These parts are not for submission.

<b>Exercise 1</b>		
Answer the following questions		
1	What is the difference between opening a file with a constructor function and opening a file with <code>open()</code> function? Present the syntax for both of them.	
2	What is a file mode? Describe three file mode options available.	
3	State the following statements are TRUE or FALSE.	
	a)	A stream may be connected to more than one file at a time;
	b)	The <code>ios::ate</code> mode allows us to write data anywhere in the file;
	c)	Besides <code>ifstream</code> and <code>ofstream</code> , we can also use <code>fstream</code> object to open a file as: <code>fstream file("text.dat");</code>
	d)	To move the file pointer by 15 positions forward from the current position, we can use: <code>seekg(15, ios::cur);</code>

<b>Exercise 2.1</b>	
Write a programme that reads in the name (Given name + space + family name) of 3 persons and writes them to a disk file. Each name in the disk file always starts on a new line. Part of the code is given on this page. Read the code first and make sure you understand each line. What you need to do then is to write a C++ function which	
1	Displays a message on the screen such as "This function is called xx times" where xx should be the value of the counter in the for loop of the main function.
2	Reads in a name from the keyboard (full name) and returns it to the main function.
3	After output the names to file, open the file and read the names in. Display the names on screen.
1	<pre>// A programme reading the name of 3 persons // and writing them to a disk file  #include&lt;iostream&gt; #include&lt;fstream&gt; #include&lt;string&gt;</pre>
2	
3	
4	
5	
6	

7	<code>using namespace std;</code>
8	
9	<code>//Place the function declaration (prototype) here</code>
10	
11	<code>int main(void)</code>
12	<code>{</code>
13	<code>    string name;</code>
14	<code>    ofstream fout("names.dat");     //change the path if necessary</code>
15	
16	<code>    for(int i=1;i&lt;=5;i++)</code>
17	<code>    {</code>
18	<code>    /* insert a statement below to call the function you write and</code>
19	<code>    keep the returned string in the string name */</code>
20	<code>        fout&lt;&lt;name&lt;&lt;endl;</code>
21	<code>    }</code>
22	<code>    fout.close();</code>
23	
24	<code>    // insert several statements to read the inputted names</code>
25	<code>    // display them on screen, each in one line</code>
26	
27	<code>    return 0;</code>
28	<code>}</code>
29	
30	<code>// Place the function definition below this line</code>
Complete the code shown below using the function that you declared and defined. Compile, link and run the programme.	

**Exercise 2.2**

A data file contains a list of telephone numbers in the following form:

```
John      51021400
Mary      51021411
Steve     51021406
Aaron     51021403
Kim       51021408
```

Write an interactive program that will access the file and implement the following functions::

1	Determine the telephone number of the specified person (name of such person is inputted from keyboard);
2	Modify his/her telephone number.