Title

Full Stone-Age Tiled Editor

Deadline

Your program is to be submitted to MMLS under your respective lecture section by Friday 15th September 2017 (before 11:59 pm). Please follow instructions to be posted on MMLS by 7th September 2017.

Grouping

To be done individually

Objective

The objective of this assignment is to assess the skill of students in designing and implementing array, function and file input/output correctly and efficiently in C++.

Problem Descriptions

(a) You are to write a program that can be used as an editor that has the following features:

- [N]ew : to create a new file
- [I]nsert : to insert one to ten words at a time
- [D]elete : to delete one to ten words at a time
- [O]verwrite : to overwrite one to ten words at a time
- [L]oad : to load a file
- [S]ave : to save a file
- [C]opy : to copy one to ten words at a time
- [X]cut: to cut one to ten words at a time
- [P]aste: to paste one to ten words at a time
- [F]ind: to find any word

- [U]ndo: to undo one step

Sample of empty tile editor with the menu is shown below (80 strings max).

```
* =========================================
File name : Text1.txt
|----+---+---+---+---+---+---+---+---|
|    | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|----+---+---+---+---+---+---+---+---|
| 00 |   |   |   |   |   |   |   |   |
|----+---+---+---+---+---+---+---+---|
| 08 |   |   |   |   |   |   |   |   |
|----+---+---+---+---+---+---+---+---|
| 16 |   |   |   |   |   |   |   |   |
|----+---+---+---+---+---+---+---+---|
| 24 |   |   |   |   |   |   |   |   |
|----+---+---+---+---+---+---+---+---|
| 32 |   |   |   |   |   |   |   |   |
|----+---+---+---+---+---+---+---+---|
| 40 |   |   |   |   |   |   |   |   |
|----+---+---+---+---+---+---+---+---|
| 48 |   |   |   |   |   |   |   |   |
|----+---+---+---+---+---+---+---+---|
| 56 |   |   |   |   |   |   |   |   |
|----+---+---+---+---+---+---+---+---|
| 64 |   |   |   |   |   |   |   |   |
|----+---+---+---+---+---+---+---+---|
| 72 |   |   |   |   |   |   |   |   |
|----+---+---+---+---+---+---+---+---|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, [X]cut, [P]aste, [F]ind, [U]ndo
==>
```

Sample of text that will be used in the text file is shown below.

```
C++ is a general purpose programming language designed to make programming more enjoyable for the serious programmer. Except for minor
details, C++ is a superset of the C programming language. In addition to the facilities provided by C, C++ provides flexible and efficient
facilities for defining new types.
```

The sample run of the editor is shown below:

(a) Initial screen

```
* ==========================================

File name : NULL

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==>
```

(b) New file

```
* ==========================================

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==> N
New file name ==> Text1.txt

---------------------- new screen ----------------------

File name : Text1.txt
|----+---+---+---+---+---+---+---+---|
|    | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|----+---+---+---+---+---+---+---+---|
| 00 |   |   |   |   |   |   |   |   |
|----+---+---+---+---+---+---+---+---|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo
==>
```

(c) Insert text

```
* ==========================================

File name : Text1.txt
|----+---+---+---+---+---+---+---+---|
|    | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|----+---+---+---+---+---+---+---+---|
| 00 |   |   |   |   |   |   |   |   |
|----+---+---+---+---+---+---+---+---|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==> I
Tile number ==> 1
Text ==> C++ is a programming language
```

```
---------------------- new screen -----------------------

File name : Text1.txt
|----+-----+----+---+------------+----------+---+---+---|
|    |  1  |  2 | 3 |          4 |        5 | 6 | 7 | 8 |
|----+-----+----+---+------------+----------+---+---+---|
| 00 | C++ | is | a | programming | language |   |   |   |
|----+-----+----+---+------------+----------+---+---+---|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==> I
Tile number ==> 4
Text ==> general purpose

---------------------- new screen -----------------------

File name : Text1.txt
|----+-----+----+---+---------+---------+------------+----------+---|
|    |  1  |  2 | 3 |       4 |       5 |          6 |        7 | 8 |
|----+-----+----+---+---------+---------+------------+----------+---|
| 00 | C++ | is | a | general | purpose | programming | language |   |
|----+-----+----+---+---------+---------+------------+----------+---|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==> I
Tile number ==> 8
Text ==> designed to make programming more enjoyable for the serious programmer.

---------------------- new screen -----------------------

File name : Text1.txt
|----+------------+------+------------+--------+----------+------------+----------+---------|
|    | 1          | 2    | 3          | 4      | 5        | 6          | 7        | 8       |
|----+------------+------+------------+--------+----------+------------+----------+---------|
| 00 | C++        | is   | a          | general | purpose | programming | language | designed |
|----+------------+------+------------+--------+----------+------------+----------+---------|
| 08 | to         | make | programming | more   | enjoyable | for        | the      | serious |
|----+------------+------+------------+--------+----------+------------+----------+---------|
| 16 | programmer. |      |            |        |          |            |          |         |
|----+------------+------+------------+--------+----------+------------+----------+---------|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==>
```

(d) Overwrite text

```
* ==========================================

File name : Text1.txt
|----+------------+------+-------------+---------+-----------+-------------+----------+---------|
|    | 1          | 2    | 3           | 4       | 5         | 6           | 7        | 8       |
|----+------------+------+-------------+---------+-----------+-------------+----------+---------|
| 00 | C++        | is   | a           | general | purpose   | programming | language | designed|
|----+------------+------+-------------+---------+-----------+-------------+----------+---------|
| 08 | to         | make | programming | more    | enjoyable | for         | the      | serious |
|----+------------+------+-------------+---------+-----------+-------------+----------+---------|
| 16 | programmer.|      |             |         |           |             |          |         |
|----+------------+------+-------------+---------+-----------+-------------+----------+---------|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==> O
Tile number ==> 16
Text ==>"fun loving" MMU students.

----------------------- new screen -----------------------

File name : Text1.txt
|----+--------+------+-------------+---------+----------+-------------+---------+---------|
|    | 1      | 2    | 3           | 4       | 5        | 6           | 7       | 8       |
|----+--------+------+-------------+---------+----------+-------------+---------+---------|
| 00 | C++    | is   | a           | general | purpose  | programming | language| designed|
|----+--------+------+-------------+---------+----------+-------------+---------+---------|
| 08 | to     | make | programming | more    | enjoyable| for         | the     | "fun    |
|----+--------+------+-------------+---------+----------+-------------+---------+---------|
| 16 | loving"| MMU  | students.   |         |          |             |         |         |
|----+--------+------+-------------+---------+----------+-------------+---------+---------|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo
==>
```

(e) Delete text

```
* ==========================================

File name : Text1.txt
|----+------------+------+-------------+---------+-----------+-------------+----------+---------|
|    | 1          | 2    | 3           | 4       | 5         | 6           | 7        | 8       |
|----+------------+------+-------------+---------+-----------+-------------+----------+---------|
| 00 | C++        | is   | a           | general | purpose   | programming | language | designed|
|----+------------+------+-------------+---------+-----------+-------------+----------+---------|
| 08 | to         | make | programming | more    | enjoyable | for         | the      | serious |
|----+------------+------+-------------+---------+-----------+-------------+----------+---------|
| 16 | programmer.|      |             |         |           |             |          |         |
|----+------------+------+-------------+---------+-----------+-------------+----------+---------|
```

```
[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==> D
From Tile Number ==> 3
To Tile Number ==> 13

---------------------- new screen -----------------------

File name : Text1.txt
|----+-----+----+-----+-----+---------+------------+---+---|
|    |  1  | 2  |  3  |  4  |       5 |          6 | 7 | 8 |
|----+-----+----+-----+-----+---------+------------+---+---|
| 00 | C++ | is | for | the | serious | programmer. |   |   |
|----+-----+----+-----+-----+---------+------------+---+---|


[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==>
```

(f) Save text to a file

```
* ==============================================

File name : Text1.txt
|----+------------+------+-------------+---------+-----------+-------------+----------+----------|
|    | 1          | 2    | 3           | 4       | 5         | 6           | 7        | 8        |
|----+------------+------+-------------+---------+-----------+-------------+----------+----------|
| 00 | C++        | is   | a           | general | purpose   | programming | language | designed |
|----+------------+------+-------------+---------+-----------+-------------+----------+----------|
| 08 | to         | make | programming | more    | enjoyable | for         | the      | serious  |
|----+------------+------+-------------+---------+-----------+-------------+----------+----------|
| 16 | programmer.|      |             |         |           |             |          |          |
|----+------------+------+-------------+---------+-----------+-------------+----------+----------|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==> S
File name (enter=Text1.txt) ==>  Text2.txt
File saved.

---------------------- Text2.txt for reference -----------------------

C++ is a general purpose programming language designed to make programming more enjoyable for the serious programmer.
```

(g) Load text from a file

```
* =============================================

File name : ExistingText.txt
|----+-----+----+-----+-----+---------+-------------+---+---|
|    |  1  | 2  |  3  |  4  |    5    |          6  | 7 | 8 |
|----+-----+----+-----+-----+---------+-------------+---+---|
| 00 | C++ | is | for | the | serious | programmer. |   |   |
|----+-----+----+-----+-----+---------+-------------+---+---|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==> L
File name ==>  NewText.txt

---------------------- new screen -----------------------

File name : NewText.txt
|----+------------+--------+------------+------------+------------+------------+----------+----------|
|    | 1          | 2      | 3          | 4          | 5          | 6          | 7        | 8        |
|----+------------+--------+------------+------------+------------+------------+----------+----------|
| 00 | C++        | is     | a          | general    | purpose    | programming| language | designed |
|----+------------+--------+------------+------------+------------+------------+----------+----------|
| 08 | to         | make   | programming| more       | enjoyable  | for        | the      | serious  |
|----+------------+--------+------------+------------+------------+------------+----------+----------|
| 16 | programmer.| Except | for        | minor      | details,   | C++        | is       | a        |
|----+------------+--------+------------+------------+------------+------------+----------+----------|
| 24 | superset   | of     | the        | C          | programming| language.  | In       | addition |
|----+------------+--------+------------+------------+------------+------------+----------+----------|
| 32 | to         | the    | facilities | provided   | by         | C,         | C++      | provides |
|----+------------+--------+------------+------------+------------+------------+----------+----------|
| 40 | flexible   | and    | efficient  | facilities | for        | defining   | new      | types.   |
|----+------------+--------+------------+------------+------------+------------+----------+----------|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==>

---------------------- NewText.txt for reference -----------------------

C++ is a general purpose programming language designed to make programming more enjoyable for the serious programmer. Except for minor
details, C++ is a superset of the C programming lan- guage. In addition to the facilities provided by C, C++ provides flexible and efficient
facilities for defining new types.
```

(h) Copy and paste text (note that paste is always treated as insert, not overwrite)

```
* =========================================

File name : Text1.txt
|----+------------+------+------------+--------+----------+------------+--------+---------|
|    | 1          | 2    | 3          | 4      | 5        | 6          | 7      | 8       |
|----+------------+------+------------+--------+----------+------------+--------+---------|
| 00 | C++        | is   | a          | general| purpose  | programming| language| designed|
|----+------------+------+------------+--------+----------+------------+--------+---------|
| 08 | to         | make | programming| more   | enjoyable| for        | the    | serious |
|----+------------+------+------------+--------+----------+------------+--------+---------|
| 16 | programmer.|      |            |        |          |            |        |         |
|----+------------+------+------------+--------+----------+------------+--------+---------|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==> C
From Tile Number ==> 12
To Tile Number ==> 17

---------------------- new screen ----------------------

File name : Text1.txt
|----+------------+------+------------+--------+----------+------------+--------+---------|
|    | 1          | 2    | 3          | 4      | 5        | 6          | 7      | 8       |
|----+------------+------+------------+--------+----------+------------+--------+---------|
| 00 | C++        | is   | a          | general| purpose  | programming| language| designed|
|----+------------+------+------------+--------+----------+------------+--------+---------|
| 08 | to         | make | programming| more   | enjoyable| for        | the    | serious |
|----+------------+------+------------+--------+----------+------------+--------+---------|
| 16 | programmer.|      |            |        |          |            |        |         |
|----+------------+------+------------+--------+----------+------------+--------+---------|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==> B

---------------------- new screen ----------------------

Clipboard :
more enjoyable for the serious programmer

File name : Text1.txt
|----+------------+------+------------+--------+----------+------------+--------+---------|
|    | 1          | 2    | 3          | 4      | 5        | 6          | 7      | 8       |
|----+------------+------+------------+--------+----------+------------+--------+---------|
| 00 | C++        | is   | a          | general| purpose  | programming| language| designed|
|----+------------+------+------------+--------+----------+------------+--------+---------|
| 08 | to         | make | programming| more   | enjoyable| for        | the    | serious |
|----+------------+------+------------+--------+----------+------------+--------+---------|
| 16 | programmer.|      |            |        |          |            |        |         |
|----+------------+------+------------+--------+----------+------------+--------+---------|
```

```
[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==>

---------------------- new screen -----------------------

File name : Text1.txt
|----+------------+------+------------+--------+----------+------------+--------+---------|
|    | 1          | 2    | 3          | 4      | 5        | 6          | 7      | 8       |
|----+------------+------+------------+--------+----------+------------+--------+---------|
| 00 | C++        | is   | a          | general | purpose | programming | language | designed |
|----+------------+------+------------+--------+----------+------------+--------+---------|
| 08 | to         | make | programming | more   | enjoyable | for        | the    | serious |
|----+------------+------+------------+--------+----------+------------+--------+---------|
| 16 | programmer. |      |            |        |          |            |        |         |
|----+------------+------+------------+--------+----------+------------+--------+---------|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==> P
Tile Number ==> 3

---------------------- new screen -----------------------

File name : Text1.txt
|----+------------+----------+-----------+------------+----------+----------+------------+------------|
|    | 1          | 2        | 3         | 4          | 5        | 6        | 7          | 8          |
|----+------------+----------+-----------+------------+----------+----------+------------+------------|
| 00 | C++        | is       | more      | enjoyable  | for      | the      | serious    | programmer |
|----+------------+----------+-----------+------------+----------+----------+------------+------------|
| 08 | a          | general  | purpose   | programming | language | designed | to         | make       |
|----+------------+----------+-----------+------------+----------+----------+------------+------------|
| 16 | programming | more     | enjoyable | for        | the      | serious  | programmer. |            |
|----+------------+----------+-----------+------------+----------+----------+------------+------------|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==> P
Tile Number ==> 3
```

(i) Cut and paste text (note that paste is always treated as insert, not overwrite)

```
* ==============================================

File name : Text1.txt
|----+------------+------+------------+--------+----------+------------+--------+---------|
|    | 1          | 2    | 3          | 4      | 5        | 6          | 7      | 8       |
|----+------------+------+------------+--------+----------+------------+--------+---------|
| 00 | C++        | is   | a          | general | purpose | programming | language | designed |
|----+------------+------+------------+--------+----------+------------+--------+---------|
| 08 | to         | make | programming | more   | enjoyable | for        | the    | serious |
|----+------------+------+------------+--------+----------+------------+--------+---------|
| 16 | programmer. |      |            |        |          |            |        |         |
|----+------------+------+------------+--------+----------+------------+--------+---------|
```

```
[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==> X
From Tile Number ==> 12
To Tile Number ==> 17

---------------------- new screen -----------------------

File name : Text1.txt
|----+------------+------+------------+---------+----------+-------------+----------+---------|
|    | 1          | 2    | 3          | 4       | 5        | 6           | 7        | 8        |
|----+------------+------+------------+---------+----------+-------------+----------+---------|
| 00 | C++        | is   | a          | general | purpose  | programming | language | designed |
|----+------------+------+------------+---------+----------+-------------+----------+---------|
| 08 | to         | make | programming |        |          |             |          |          |
|----+------------+------+------------+---------+----------+-------------+----------+---------|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==> B

---------------------- new screen -----------------------

Clipboard :
more enjoyable for the serious programmer

File name : Text1.txt
|----+------------+------+------------+---------+----------+-------------+----------+---------|
|    | 1          | 2    | 3          | 4       | 5        | 6           | 7        | 8        |
|----+------------+------+------------+---------+----------+-------------+----------+---------|
| 00 | C++        | is   | a          | general | purpose  | programming | language | designed |
|----+------------+------+------------+---------+----------+-------------+----------+---------|
| 08 | to         | make | programming |        |          |             |          |          |
|----+------------+------+------------+---------+----------+-------------+----------+---------|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==>

---------------------- new screen -----------------------

File name : Text1.txt
|----+------------+------+------------+---------+----------+-------------+----------+---------|
|    | 1          | 2    | 3          | 4       | 5        | 6           | 7        | 8        |
|----+------------+------+------------+---------+----------+-------------+----------+---------|
| 00 | C++        | is   | a          | general | purpose  | programming | language | designed |
|----+------------+------+------------+---------+----------+-------------+----------+---------|
| 08 | to         | make | programming |        |          |             |          |          |
|----+------------+------+------------+---------+----------+-------------+----------+---------|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==> P
Tile Number ==> 3
```

```
---------------------- new screen ----------------------

File name : Text1.txt
|----+------------+----------+-----------+------------+----------+----------+------------+-----------|
|    | 1          | 2        | 3         | 4          | 5        | 6        | 7          | 8         |
|----+------------+----------+-----------+------------+----------+----------+------------+-----------|
| 00 | C++        | is       | more      | enjoyable  | for      | the      | serious    | programmer|
|----+------------+----------+-----------+------------+----------+----------+------------+-----------|
| 08 | a          | general  | purpose   | programming| language | designed | to         | make      |
|----+------------+----------+-----------+------------+----------+----------+------------+-----------|
| 16 | programming|          |           |            |          |          |            |           |
|----+------------+----------+-----------+------------+----------+----------+------------+-----------|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==>
```

(j) Find a text

```
* ===============================================

File name : Text1.txt
|----+------------+------+------------+---------+-----------+------------+----------+---------|
|    | 1          | 2    | 3          | 4       | 5         | 6          | 7        | 8       |
|----+------------+------+------------+---------+-----------+------------+----------+---------|
| 00 | C++        | is   | a          | general | purpose   | programming| language | designed|
|----+------------+------+------------+---------+-----------+------------+----------+---------|
| 08 | to         | make | programming| more    | enjoyable | for        | the      | serious |
|----+------------+------+------------+---------+-----------+------------+----------+---------|
| 16 | programmer.|      |            |         |           |            |          |         |
|----+------------+------+------------+---------+-----------+------------+----------+---------|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==> F
Enter text to find : programming

---------------------- new screen ----------------------

File name : Text1.txt
|----+------------+------+------------+---------+-----------+------------+----------+---------|
|    | 1          | 2    | 3          | 4       | 5         | 6          | 7        | 8       |
|----+------------+------+------------+---------+-----------+------------+----------+---------|
| 00 | C++        | is   | a          | general | purpose   | programming = language | designed|
|----+------------+------+------------+---------+-----------+------------+----------+---------|
| 08 | to         | make | programming =  more  | enjoyable | for     | the      | serious |
|----+------------+------+------------+---------+-----------+------------+----------+---------|
| 16 | programmer.|      |            |         |           |            |          |         |
|----+------------+------+------------+---------+-----------+------------+----------+---------|

[N]ew, [I}nsert, [D]elete, [O]verwrite, [L]oad, [S]save
[C]opy, show-clip[B]oard, [X]cut, [P]aste, [F]ind, [U]ndo,
==>
```

(k) Undo - will revert the editor back one step. Commands which can be undone - paste, cut, copy, delete, overwrite an insert. Invalid for other commands.

(l) Bonus - Undo more than 1 steps

(m) Error checking
-   **Out of range check for insert, delete, overwrite**
-   **File not found for load.**

Deliverables
a)   Source code with appropriate comments inserted inside the code.

6.   Additional Info on Deliverables
a)   Source codes have to be properly formatted and documented with comments.
b)   DO NOT submit the .exe file
c)   For ALL your .cpp files, insert the following information at the beginning of your code

```
/*********|*********|*********|
Program: YOUR_FILENAME.cpp
Course: TCP1101 Programming Fundamentals
Year: 2017/18 Trimester 1
Name: . . . . . .
ID: 1071001234
Email: abc123@yourmail.com
Phone: 018-1234567
*********|*********|*********/
```

7.   Softcopy submission

a)   Name your .cpp file following the following format:
TUTORIALSECTION_ASSIGNMENTPART2_FULLNAME
          Example:
          TT01_A2_FRANK_CARRANO.cpp
b)   It is your responsibility to check that you have uploaded the correct file. Please double check your submission. If you accidentally upload an empty file, you will get 0.

8.   IMPORTANT NOTES

No mark will be given to both the code giver and the code receiver. The student that cheats in assignment using whatever means will be awarded zero mark. Please be reminded of the followings:

- goto is not allowed
- **vector implementation is NOT allowed**
- <xxxx.h> is not allowed except for the random function rand().
- code must be platform independent
- compilation without warning or error
- good coding format and style (indent statements, skip lines, braces, comments, consistent, etc)
- codeblocksmingw g++ compiler can run your code
- if any instruction not followed, no mark will be given
- Student should submit only two files in zip format which are cpp file and odt/doc file.

Evaluation Marksheet

Criteria / Features	Marks allocation	
1. Create New File	Perfect = 2 Yes with some error / missing component = 1 No Implementation = 0	
2. Insert feature with error checking	Perfect = 4 Yes with only a little error / missing component = 3 Yes with some error / missing component = 2 Yes but many error = / missing component = 1 No Implementation = 0	
3. Delete feature with error checking	Perfect = 4 Yes with only a little error / missing component = 3 Yes with some error / missing component = 2 Yes but many error = / missing component = 1 No Implementation = 0	
4. Overwrite feature with error checking	Perfect = 4 Yes with only a little error / missing component = 3 Yes with some error / missing component = 2 Yes but many error = / missing component = 1 No Implementation = 0	
5. Save feature	Perfect = 2 Yes with only a little error / missing component = 1.5 Yes with some error / missing component = 1 Yes but many error = / missing component = 0.5 No Implementation = 0	
6. Load feature with error checking	Perfect = 2 Yes with only a little error / missing component = 1.5 Yes with some error / missing component = 1 Yes but many error = / missing component = 0.5 No Implementation = 0	
7. Copy and Paste	Perfect = 3 Yes with only a little error / missing component = 2 Yes with some error / missing component = 1.5 Yes but many error = / missing component = 1	

	No Implementation = 0	
8. Cut and Paste	Perfect = 3 Yes with only a little error / missing component = 2 Yes with some error / missing component = 1.5 Yes but many error = / missing component = 1 No Implementation = 0	
9. Find a text	Perfect = 2 Yes with only a little error / missing component = 1.5 Yes with some error / missing component = 1 Yes but many error = / missing component = 0.5 No Implementation = 0	
10. Undo	Perfect = 2 Yes with only a little error / missing component = 1.5 Yes with some error / missing component = 1 Yes but many error = / missing component = 0.5 No Implementation = 0	
11. Source code documentation and comments	Very good documentation/comment = 2 Average documentation/comment = 1 Poor documentation = 0.5 No documentation = 0	
Bonus	Perfect = 2 Yes with only a little error / missing component = 1.5 Yes with some error / missing component = 1 Yes but many error = / missing component = 0.5 No Implementation = 0	