School of Computing
Faculty of Engineering
SCSJ 2013 – Data Structures and Algorithms
Mini Project

STACK IMPLEMENTATION

1. Given the codes for **stack_01.cpp** and do the following tasks.

    a) Complete the code for **pop()** function so that it will return the popped item, (char), if the stack not empty and return an asterisk '*' if the stack is empty.

    b) Complete the code for **printPop(char)** function so that:

        i)   it will print the popped item (char) if the parameter not equal to '*' – *"Popped item: ?"*
        ii) and print *"Pop operation fail - stack is empty!"* if the parameter equal to '*'.

    The output must be exactly as below:

    ```
    Push operation success! item: a
    Push operation success! item: b
    Push operation success! item: c
    Popped item: c
    Popped item: b
    Popped item: a
    Pop operation fail - stack is empty!
    ```

2   Given the codes for "stack_02.cpp" and do the following tasks.

    a) Complete the code for **printLIFO()** function so that it will print all the stack item using LIFO and you must not using **pop()** function to do it.

    b) Complete the code for **printFIFO()** function so that it will print all the stack item using FIFO and you must not using **pop()** function to do it.

    c)

    The output must be exactly as follow:

    ```
    Push operation success! item: a
    Push operation success! item: b
    Push operation success! item: c

    FIFO printing
    abc

    LIFO printing
    cba
    ```

3   Given the codes for "stack_03.cpp" and do the following tasks. Complete the code
    for **emptyStack()** function, which will remove all items in the stack using the **pop()**
    function. The output must be exactly as below:

```
Push operation success! item: d
Push operation success! item: e
Push operation success! item: s
Push operation success! item: s
Push operation success! item: e
Push operation success! item: r
Push operation success! item: t
Push operation success! item: s

Empty the content of the stack with the following order :
stressed
Stack is empty
```

Submission Procedure

Save all the files in one folder with you name and zip the folder.
Example for the folder name : RandyStackProject
Submit in e-learning by : Saturday, 20th June 2020