

## Documentation

For all the lab we are going to use Doxygen comments for documentation. Here is the list of comments that will be useful for documenting your code.

Every header and .cpp file should contain the following comments,

**@file:** Filename

**@author:** Name of the author

**@brief:** A brief description of the file contents and purpose

**@date:** date started coding

**Example,**

Let us take lab 1 (Boardgames) Executive header and cpp file

```
/**
 * @author   XXXXXXXX
 * @file     Executive. h
 * @date     September 08/2021
 * @brief    This header file defines the Executive class. It is
 *           able to read the text file
 *           and print menu options for the user.
 **/

/**
 * @author   XXXXXXXX
 * @file     Executive.cpp
 * @date     September 08/2021
 * @brief    This file is in charge of implementing the member
 *           methods of the class defined in Executive.h
 **/
```

Every method defined in the header file should contain the following comments,

**@pre:** States the condition that must be true for a member method to work as expected (e.g invalid values, invalid range, invalid conditions)

**@post:** Describe the side effects of the function. It describes whether the function modifies the input parameter or the calling objects or any other functionality of the program

**@param:** Parameters that are passed to the function

**@return:** Specify what does the function returns after execution

**@throw:** Specify the error a function might throw

**Example,**

Let us consider a stack pop and peek function,

```
/**
 * @pre Stack is non-empty
 * @post Top element is removed from the stack
 * @param none
 * @throw std::runtime if stack is empty
 * @return none
 */
void pop();

/**
 * @pre Stack is non-empty
 * @post returns character on top of the stack
 * @param none
 * @throw std::runtime if stack is empty
 * @return returns character stored
 */
char peek() const;
```