# Lab 06 - Interrupt Processing Setup

**Direction: Submit typed work on github.**

For this lab, your objective is to complete each of the following tasks. You cannot use any STL libraries.

- ☐ Define a generic **PriorityQueue** class that has the methods:
  - Enqueue($v$,$p$) - adds an item $v$ to the queue based off its priority $p$.
  - Dequeue() - removes front item from the queue.
  - Peek() - returns but does not remove the front item of the queue.
  - IsEmpty() - states if the queue is empty.

  The priorities should be integers between 0 and 9. If an invalid priority is given to the `Enqueue()` method, the item should not be added to the queue.

- ☐ Define a generic **Stack** class that has the methods:
  - Push() - adds an item to the stack.
  - Pop() - removes the top item from the stack.
  - Top() - returns but does not remove the top item of the stack.
  - IsEmpty() - states if the stack is empty.