Week 12:

Learning Materials: Templates, Exceptions

Task 1:
Create a class **my_stack** as a **generic class**, so that my_stack can store any kind of data. In main(), create **my_stack** of at least **two** different types, and store some data in them.

Some important member functions of my_stack.

push(object) : store the object at the end of my_stack
pop() : return the last object inserted in my_stack and delete that element from my_stack
peek() : return the first object inserted in my_stack and do **not** delete/ remove the element from my_stack.

Task 2:
Create a function called amax(array,size,n) that returns the value of the nth largest element in an array. The arguments to the function should be the address of the array and its size. Make this function into a template so it will work with an array of any numerical type. Write a main() program that applies this function to arrays of various types.

Task 3:
Add an exception class to task 1 so that it can handle popping while my_stack does not have any element. The catch block should display the exception using an error message.