COSC 2321 Homework for chs.6 and 7

Total 65 pts.

0] (20 points) Declare a class **MyArray** whose only member is a pointer to an int, named **pInt**.

The class has:

- a constructor with 3 arguments, which:
  - allocates memory dynamically for an array of 3 integers (use **new**)
  - stores the 3 arguments in the array
  - makes **pInt** point to the array.
- a default constructor, which does the same, but stores 0, 0, 0 in the array.
- a destructor, which:
  - prints the message "Destructing x, y, z!", where x, y, and z are the values stored in the dynamic array
  - deallocates the memory (use **delete [ ]**)

Test in the main function by creating two objects of this class, one using the non-default constructor, and one using the default constructor.

1] (20 points) Use the class **SuperVar** from ch.7 of our text, but change it so that the union has the following members: **short int**, **int**, **float**, **double**. Modify the class declarations and definitions accordingly.

In the main function create an object of class **SuperVar** named **w**.

w is initialized with the integer **42**. <**Important: From this point on, you cannot write 42 as part of your code – instead, you have to make use of w!**>

Create three more objects **x, y, z**, which store 42 in the form of a short int, float, and double, respectively (hint: use type casting)

Print all 4 objects.

2] (5 points) Answer this question with pencil-on-paper: Does **SuperVar** need a destructor?

Explain either way: _____

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