

Assignment 4

1. Using Assignment #2, derive a SoftwareDeveloper class from the Student class. Add the following data members to the a SoftwareDeveloper class:
 - a. A character pointer for the SoftwareDeveloper's address (e.g. char * address)
 - b. A character pointer for the SoftwareDeveloper's city
 - c. A character pointer for the SoftwareDeveloper's state
 - d. A zip code
2. Write and test change address, city, state, and zip code member functions for the SoftwareDeveloper class.
3. Write a copy constructor for the SoftwareDeveloper class.
4. Write a deep copy member function for the SoftwareDeveloper class.
5. Change the print SoftwareDeveloper function to display all its data members.
6. Change the age and city of a SoftwareDeveloper. Test your change methods.

Note: (a) Your constructors for the SoftwareDeveloper class that have parameters should use dynamic memory and (b) you will have to write a destructor that frees dynamic memory

Test your program by

Adding a cout statement to your copy constructor, constructors, and destructors. Print out the number of each step.

1. Write a function that passes by copy (the copy constructor should be called)

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2. Write a function that passes by reference
3. Write a function that returns by copy (the copy constructor should be called)
4. Write a function that returns by reference (the copy constructor should not be called)
5. Use the initialization construct (the copy constructor should be called)
6. Test your deep copy function

Do NOT include your Assignment #2 output in Assignment #4

SoftwareDevelopers

Name	Student's Id	Phone	Age	Gender	Class Standing	GPA
Joe Calculus	64879	949-555-1234	44	M	Freshman	3.3
Mary Algebra	76309	213-555-5555	21	F	Junior	4.0
Jo Trig	10192	714-703-1234	28	F	Senior	2/9

Name	Address	City	State	Zip Code
Joe Calculus	1234 Main Avenue	Laguna Niguel	CA	92677
Mary Algebra	3333 Marguerite Pkwy	Mission Viejo	CA	92646
Jo Trig	9876 Elm Street	San Clemente	CA	92672