

## Dynamic Memory – Lab with vectors, objects, and pointers

Read over the whole starter code before you begin. Make sure you understand all the pieces, especially in main.

1. Write the `print()` method for `person`. This function should print out a person's name and age, along with their dog's name and age if they own a dog. Go to main and make sure `print()` works OK.
2. Write the `print_people()` function which prints all the people in a vector. Make sure when main calls this function it works.
3. Write the `adopt_dog()` method for `person`. This method should set the pet pointer to a new dog created on the heap. Go to main and write code to test (there are three test cases to fill in).
4. Write the destructor for `person`. How do you know if you should delete the dog pointer? Test in main – you should not get any errors.
5. Write the `print_dogs()` function. This function should print all the dogs who are owned by anybody. Skip over people who don't own a dog.
6. Write the `switch_dogs()` function. This should switch the owners of two dogs.