CS360L Final project, spring 2014

- **Topic: Airplane Ticket System**

1. Create Person class with first_name, last_name, gender, age, address, city, state, zip_code, phone_number and other information if need. Create get and set functions for accessing and modifying elements. Create Display function to display information.
2. Create Pilot class by inherit Person class, and add flight_hour, position (captain or copilot), and other information if need. Create get and set functions for accessing and modifying elements. Create Display function to display information.
3. Create FlightAttendance class by inherit Person class, and add height, weight, and position (purser or crew member), Create get and set functions for accessing and modifying elements. Create Display function to display information.
4. Create Airline class with start_city, land_city, start_time, and land_time, flight_hour (=land_time - start_time), company (DELTA, American Airlines, UNITED, etc.), ID, type (Airbus A320 or Boeing 757, etc.), pilots and flight_attendances. Create function to set up crew and Display information.
5. Create Ticket class with number, price, airline, and passenger. setPrice function to set up price based on age, flight_hour, and seat_class (coach, business, or first). setAirline function to set up airline, setPassenger to set up passenger, Display function for display information.

- **Test your program:**

1. Set up airline schedule for one week. Initiate pilot, flight attendances, and airline for each airline on main function or use file open.
2. Use switch to show options for checking airline and ticket option.
3. Input passenger information when purchase ticket.
4. Display all passengers for one airline.
5. Add other functions if need.

- **Knowledge (Please use as much as you can, not necessary to cover all):**

1. Three different constructor and destructor. Get and set functions.
2. Display function.
3. Inheritance, composition, and aggregation.
4. Overloading and overriding functions.
5. Operator overloading.
6. Polymorphs and virtual function.
7. Constant variables or methods.
8. Dynamic memory allocation.
9. This pointer.
10. Friend function.
11. File open.
12. Exception.
13. Template.

- ## Requirement for Report
    1. You can form a group to work together, one group can have one, two, or three students. Each one must have your own program on your own laptop, but code can be the same.
    2. Each group must send one zip file at the end of week 14 **with** one report, all .cpp, and .h file, and screen shots. On week 14 lab, you must give me a demo and submit a hard cope report on A4 paper.
    3. On the report, show me how you design the program, what kinds of knowledge you use, which classes you have, and what the relationship between them is. How you test your program. On which part, each member make a greater contribution. What you think about this project, and what you think you can make improvement in the future.

For students who do the project, final exam is optional for you to take. You still need to attend each class on time to tell me what you finish in each week, and show me your weekly program on lab handout.