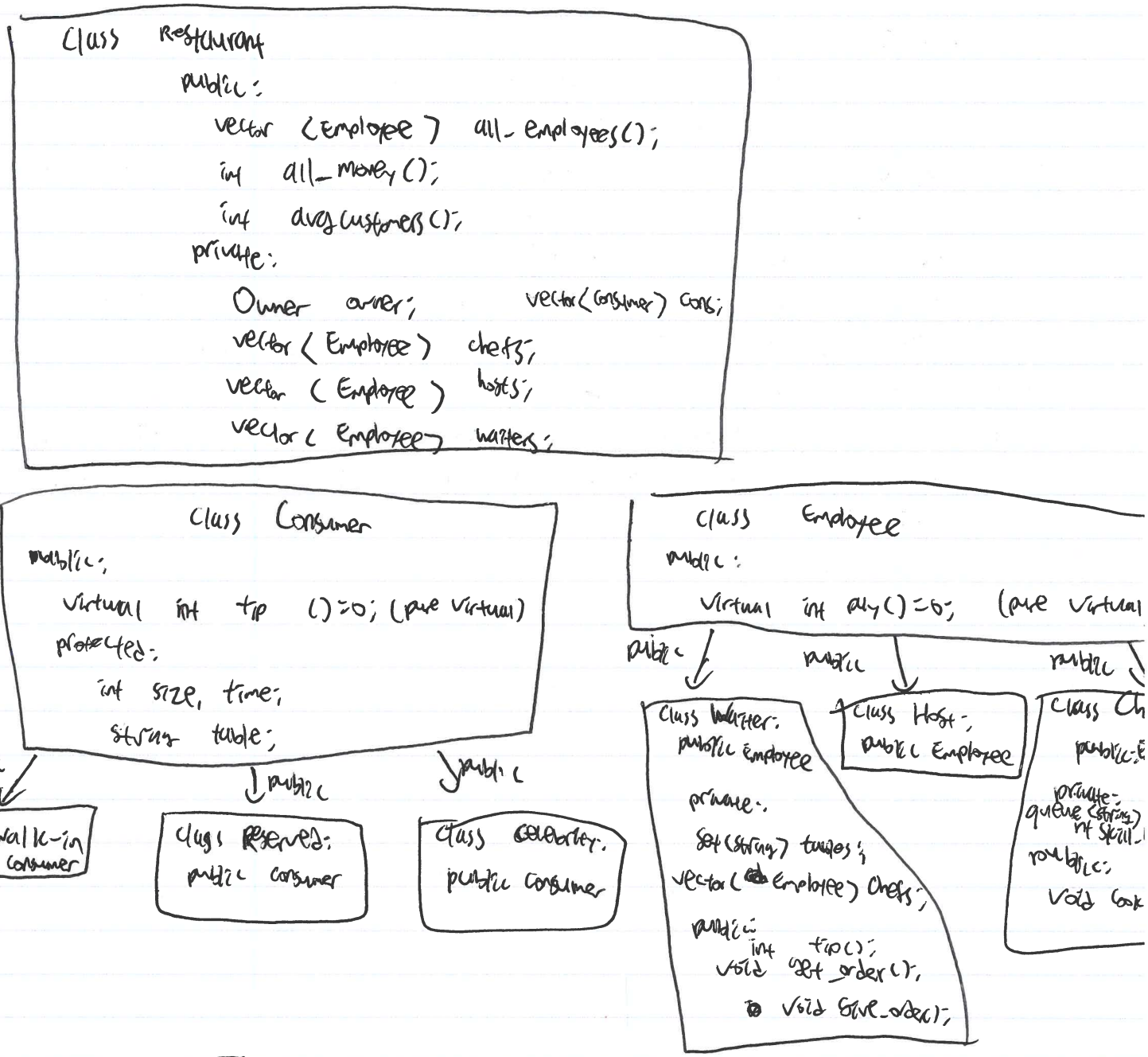
problem 1.



Abstract classes: Consumer, Employee

Not Abstract classes: Restaurant, walk-in, Reserved, Celebrity, waiter, Host, Chef.

Explanation:

I chose Consumer and employee to be abstract classes so that they can be a prototype for each class that inherit whichever one. All inherited classes will define the pure virtual functions inside themselves. I didn't specify them in the diagram b/c of redundancy. I added unique data members to each class (if necessary) to support all the functionalities required by the problem such as host retrieving orders from a table and bringing them to a chef. waiters have chefs so that they can assign a chef to cook. Finally, the class Restaurant has owner, chefs, hosts, and waiters, and consumers as private members so that they can do any necessary operations.