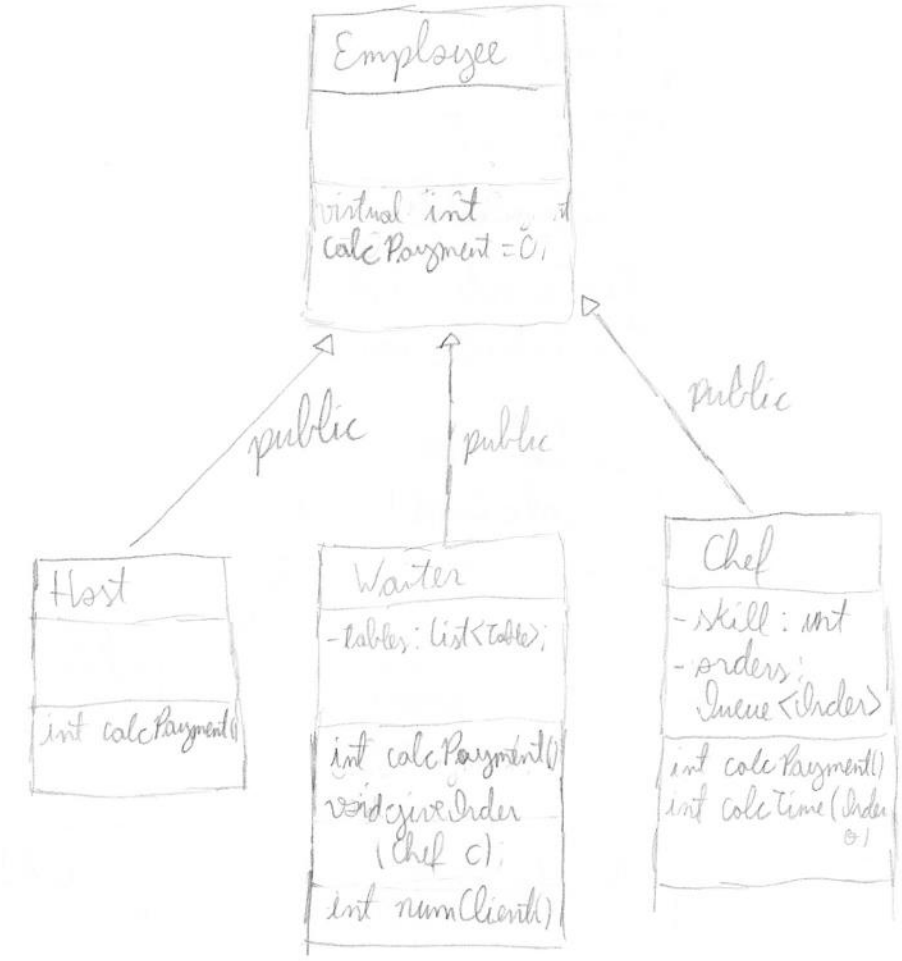
Caio Vinicius Marques Teixeira

CS104 – Homework 05 – Step 1

Employees

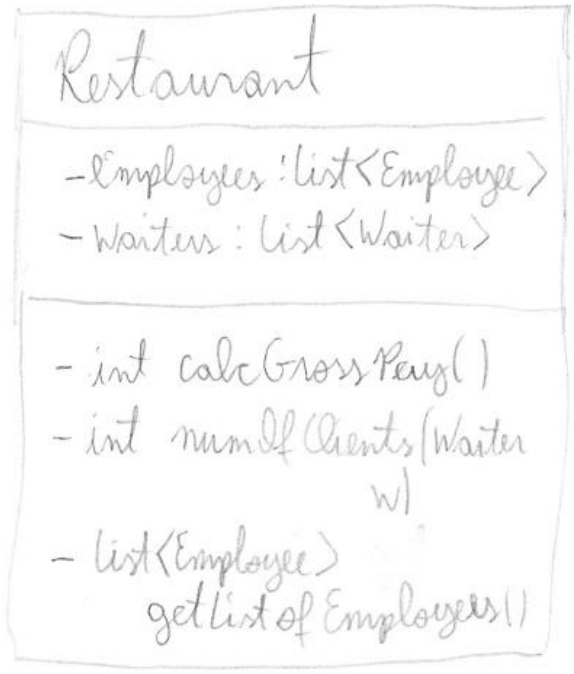


I decided to define each type of employee as a child class of the abstract class Employee, note that calcPayment is a pure virtual method, so each child class must has an implementation to calculate the payment.

The Waiter class has a List of Table objects to track each table that a waiter is assigned to wait on, this list is also used to calculate the number of costumers that a waiter is serving.

The Chef class has a skill data member and a Queue of Orders to track the orders that a chef is assigned to cook. The calcTime method must return the time that one order will take long to be prepared.

Restaurant



The restaurant class has two main data containers: a list of all employees and a list of waiters (it could be useful to calculate the total number of customers being served). The calcGrossPay method can calculate the gross amount of payments.

Table

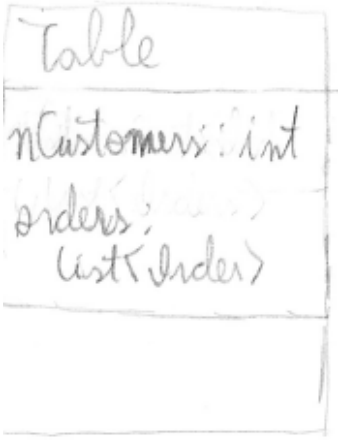
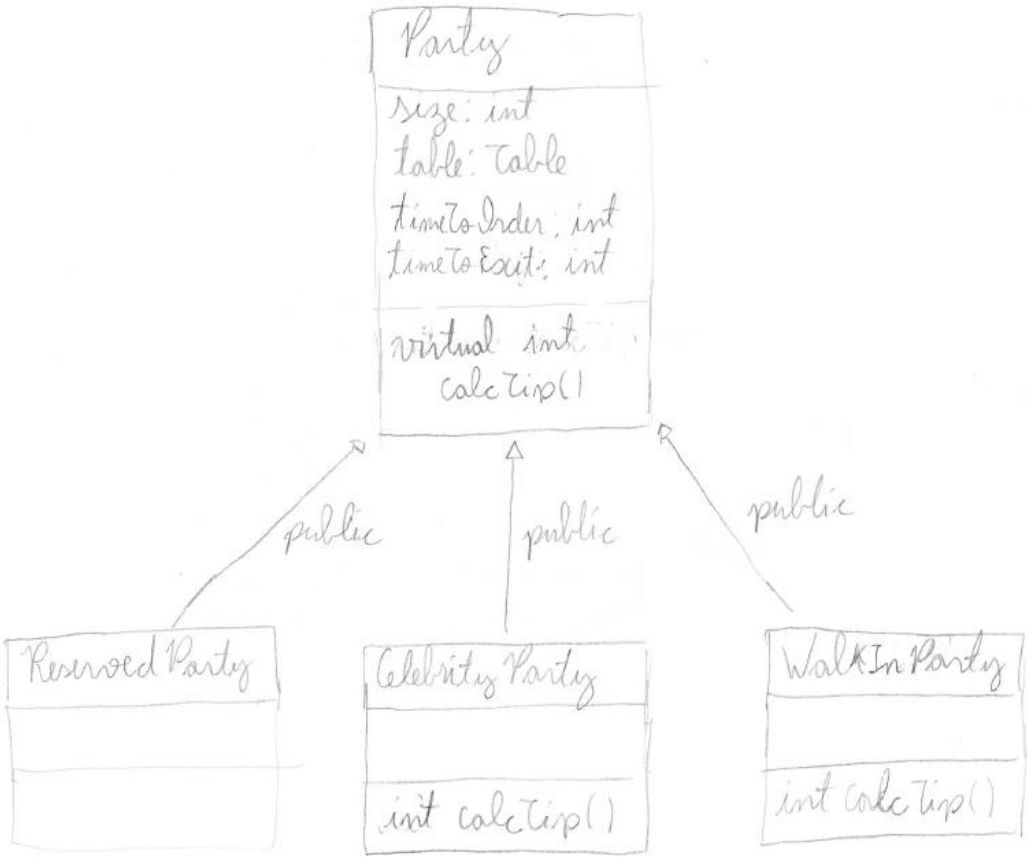


Table class keep track of the number of customers and all the orders of each table.

Parties



I decided to create a main Party class to centralize all the common data members (like size, assigned table, etc.), I also defined a virtual method to calculate the tip (note that the method is not pure virtual, so a general implementation must exist), so the child classes can calculate the tip in each different way. One another detail is the ReservedParty class, note that this class does not implement any new data member or method, but I decided to make it a separate child class just in case that some more requirements for reserved parties could be implemented in the future.