

## YourTurn6 Pizza:

- You were also given the Customer class and the Start Class
- Build an enumerated type called Toppings that contains CHEESE, PINEAPPLE, EXTRACHEESE, EXTRAPINAPPLE
- Build an enumerated type called OrderStatus that contains PENDING, PREPARING, COMPLETE
- Build an enumerate type called Size that contains SMALL, MEDIUM, LARGE
- Write a PizzaOrder class that includes
  - the following instance variables:
    - Customer
    - Size
    - An ArrayList of Topping
    - OrderStatus
  - A method called addTopping
  - A method called addString that will return a String in this format:
    - Rich 555-5555 Crazy Street CHEESE EXTRAPINEAPPLE
  - Various constructors and getter and setters
- Write a Class called MamasPizzaEngine that:
  - Has a Queue of PizzaOrder called pendingQueue (this is where the order is added when the submitOrder method is called)
  - Has a orderBeingPrepared instance variable of type PizzaOrder (this is the order that is currently being prepared by the chef)
  - Has an ArrayList of PizzaOrder called pizzaOrdersWaitingForPickup that contain
     PizzaOrders that are completed and are waiting for pickup.
  - Has the following methods:
    - submitOrder that accepts a PizzaOrder and adds it to the end of the pendingQueue. This queue contains all of the orders that are waiting for the pizza chef to make. When a new PizzaOrder is added to the queue, we set the orderStatus to PENDING. The method will return the PizzaOrder that was passed to it.
    - getNextOrderToPrepare which accepts nothing and returns a PizzaOrder. This method takes the PizzaOrder out of the front of the pendingQueue and assigns it to the orderBeingPrepared instance variable. Mama's Pizza can only prepare one pizza at a time and the PizzaOrder associated with that pizza is always stored in the orderBeingPrepared instance variable. We will also change the Status of this pizza order to PREPARING.

- completeOrderBeingPrepared which accepts nothing and returns PizzaOrder. This method take the order that is currently assigned to orderBeingPrepared (the order that the pizza chef is currently making), changes its status to COMPLETE, adds it to the pizzaOrdersWaitingForPickup ArrayList and sets orderBeingPrepared instance variable to null since there is not yet another order being prepared.
- customerPickup which accepts a String containing the customer's name. The
  method searches the pizzaOrdersWaitingForPickup ArrayList for the order that
  has a matching customer name, removes it from the ArrayList, and returns that
  order. If there isn't an order with a matching name, the method returns null
- getCurrentStatus which accepts nothing and returns a String that describes the three main parts of Mama's Pizza at a point in time:

```
Mama's Pizza Status
Pending Queue:
Aiko
                555-5555
                                    Crazy Street
                                                       CHEESE
                                                                         EXTRACHEESE
Current Order:
                555-5655
                                    Very Crazy Street EXTRACHEESE
                                                                         EXTRAPINEAPPLE
Waiting For Pickup:
                  555-5555
                                    Crazy Street
                                                       CHEESE
                                                                         EXTRAPINEAPPLE
Rich
```

- Note that, if the Current Order is null then it should return "No orders currently being worked on"
- If everything has worked out well, running Start should result in this output:

```
Submitting new order for Lori
Submitting new order for Liz
Submitting new order for Samar
Submitting new order for Aiko
Chef is now preparing Rich order
Rich order is now complete and being moved to Awaiting Pickup
Chef is now preparing Lori order
Lori order is now complete and being moved to Awaiting Pickup
Chef is now preparing Liz order
Mama's Pizza Status
Pending Queue:
Samar
                   455-5545
                                      More Crazy Street CHEESE
Aiko
                   555-5555
                                       Crazy Street
                                                           EXTRACHEESE
Current Order:
Liz
                   555-5555
                                       Jazzy Street
                                                           CHEESE
Waiting For Pickup:
```

555-5555

555-5655

Rich

Lori

Crazy Street

Very Crazy Street

CHEESE

EXTRACHEESE

**PINEAPPLE** 

**EXTRAPINE** 

**EXTRAPINE**