R1: Allow customers log in the booking system.

R2: Allow customers receive numbers that one number matches one person.

R3: Allow the number matches an unique QR.

D1: Allow customers register the booking system.

D2: Allow the system dispatches the numbers to customers.

D3: Allow the store managers register the booking system.

//

R4: Allow customers make some appointments with the store.

R5: Allow customers estimate their arrival time from their location to the store.

R6: Allow customers use the application to send information about the arrival time to the store manager.

D4: The application receives some appointments and make counts.

D5: Allow the GPS system that is used by customers is accurate.

//

R7: Allow customers make their lists about purchased goods.

R8: Customers specify the categories of goods they intend to buy.

D6: The store has enough goods that are needed by customers.

//

R9: Allow some people who can’t use the numbers to derive their QR have their tickets that can replace the number.

R10: Allow people who possess tickets people make some appointments with store.

D7: The store has been prepared these tickets for these customers who can’t use the app.

//

R11: Allow customers receive an alert which can transfer the information that the store ask customers to offer their arrival time.

R12: Allow customers to caculate the arrival time use some extre app.

R13: Allow customers to upload their distance and the arrival time.

D8: The alert system set sone signals to alert customers.

D9: Allow customers get to know their location accurately.

//

R14: Allow customers receive the periodic notification of available slots in a day or time range.

R15: Allow customers to cancel the retrieved number and the booking.

D10: The customers can cancel their appointments in advance.

//

R16: Allow customers make a queue if the customers come to the store early.

R17: Allow customers who have tickets make queues.

R18: Allow people enter the store at the same time if they buy different goods.

R19: Allow customers enter the store if the number of people is less than the maximum restrict number.

R20: Customers make some queues and enter the store in turn if they buy the same goods.

D11: Customers’ purchasing time is limited.

D12: The length of queues is limited.

D13: the goods are enough for customers to buy.

//

R21: Allow customers enter the store with the unique QR derived by the number.

R22: Allow customers get out the store with scanning their QR again.

D14: The QR is efficient.

//

R23: Allow store-manager get the information about the customers’ arrival time.

R24: Allow store-manager control the duration of customers’ visiting time.

D15: The information generated by the system automatically.

D16: The store-manager has authories to check these informations.

//

R25: Allow the store manager determine the number of customers currently staying in the store.

R26: Allow store-manager set the maximum number of customers staying in the store.

D17: The maximum number of customers can be changed if necessary.

//

R27: Retrieved numbers and QR codes are unique.

D18: The QR is fixed once it was generated.

//

R28: Allow the store-manager verify the number and check the customer's QR code.

R29: If the customer does not have a QR code and only has tickets, the store administrator should check the customer's ticket.

R30: Allow store-manager receive a push notification when a QR code is scanned.

D19: The store system let the customers enter if customers’ QR are scanned.

//

R31: The store manager customer needs to confirm whether the customer has scanned the QR code when the customer leaves the store.

D20: The store system use QR to control the customers’ entering and get-outting.