**Domain: Shirt Store**

Business Rules

1. Every shirt shall have an ID, Name, Color, Size, Cost
2. All employees shall have a First Name, Last Name, Phone Number, Address, Unique ID
3. Customers can return a shirt within 14 days with an ID relating to the transaction (Receipt)
4. Customers shall be able to buy 1 or more shirts
5. Online orders shall have a unique order ID
6. Online orders shall have the Name, Color, and Size of the shirt in the description
7. Online orders shall be able to be delivered to the customers house or store
8. Employees shall offer a loyalty program to customers
9. An inventory is defined as a storage for all the shirts that are in the store
10. All employees shall tend to customers
11. Loyalty program shall be a point base system
12. All customers shall have a First Name, Last Name, ID, Date of Birth, and Address
13. All registers shall take cash and card
14. All registers shall give the customer the option to swipe, tap, or insert if choosing “card” option
15. Customer’s info shall show up on screen if using a card
16. Shirts in inventory shall have its own inventory ID
17. There shall be at least one manager working
18. If payment fails there shall be an error message that pops up
19. Online order shall be verified by customers ID
20. Every shirt shall have the biggest size being XXL
21. Customer shall get a $25 coupon upon reaching 500 points
22. Every shirt shall be added to inventory by employees
23. Loyalty Program Customers shall have a First Name, Last Name, Phone Number, ID, and Address
24. The register shall have a Shirt ID, Payment Method, Loyalty, Customer ID, and Transaction ID
25. Return shall have a Customer ID, Date, Payment Method, Transaction ID, and 14 Day Period

Entities

Shirts

* **Name (**Will help keep inventory by making it easier for employee to search for product)
* **Color** (Provide the customers with more options and keep it organized for the employee when selling shirts)
* **Size** (Will help keep inventory and give customers options making it easier for them to shop)
* **Cost** (Information is needed when a customer asks an employee hence keeping it in the system will result in quick answers)
* **Shirt ID** (Can be used by employees as well as the system to identify each unique ID that each shirt has making sure everything is sold or nothing is missing)

Manager

* **First Name** (Keep track of which manager is working so they are paid correctly as well as make sure if it is a manager or not)
* **Last Name** (Keep track of which manager is working so they are paid correctly as well as make sure if it is a manager or not)
* **Address** (Keep track of where the manager lives so payment can be sent to the correct place)
* **Number** (manager can be contacted about anything relating to store or if needed for assistance)
* **Employee ID** (Manager can use this to clock in or out as well as have managerial permissions)

Employees

* **First Name** (Keep track of which employee is working so they are paid correctly as well as make sure if it is a manager or not)
* **Last Name** (Keep track of which employee is working so they are paid correctly as well as make sure if it is a manager or not)
* **Address** (Keep track of where the employee lives so payment can be sent to the correct place)
* **Number** (Contact employee in case of emergencies or changes in schedules)
* **Employee ID** (Employees can use this to clock in or out)

Customers

* **First Name** (Keep track of which customer is purchasing making it easier for the employee to sign them up for the loyalty program or search them up through the system)
* **Last Name** (Keep track of which customer is purchasing making it easier for the employee to sign them up for the loyalty program or search them up through the system)
* **Date Of Birth** (Keep track of when customers birthdays are so they can get a deal on shirts)
* **Address** (For online orders it is helpful to have so they can have shirts shipped to the address)
* **ID** (Keep track of which sale belongs to which customer)

Online orders

* **Name (**Will help keep inventory by making it easier for employee to search for product and customer has the information on what product is in shipment)
* **Color** (Customer has the information on what product is in shipment)
* **Size** (Customer has the information on what product is in shipment)
* **Shirt ID** (Employees can keep inventory on which shirt was part of the online order)
* **Online ID** (Customer can have the info on the shipment details on online order)

Inventory

* **Brand** (Keeps track of the shirts and gives the employee information for searching the shirt with brand)
* **Color** (Keeps track of the shirts for the employee based on the color of the shirt)
* **Size** (Keeps track of the shirts for the employee based on the size of the shirt)
* **Name** (Lets the employee search shirt and keep track of the shirt in the system by name)
* **Shirt ID** (Lets the employee search and keep track of the shirt by its unique ID)

Returns

* **Customer ID** (Keep track of which sale belongs to which customer)
* **Date** (To check if the 14-day period hasn’t been passed for the customer to return shirt)
* **Payment Method** (To keep track so the money can go back to the customer accordingly)
* **Transaction ID** (Keep track so the employee can track the sale)
* **14 Day Period** (Check if the period hasn’t passed so the customer can return the shirt)

Loyalty Program

* **Interested in** (To check if the customer has already been offered to join program)
* **Discount** (To apply the discount for anyone in the program)
* **Customer ID** (Track which customers have moved over to become part of the program)
* **Loyalty ID** (Track the customers that have signed up for the program)
* **Have 500 Points** (Track if customers have hit 500 points so they are eligible for the coupon)

Register

* **Shirt ID** (Lets the employee search and keep track of the shirt by its unique ID)
* **Payment Method** (Employee can know if cash if needed to be given back or offer the options for card)
* **Loyalty** (Employee can apply the discount if part of the loyalty)
* **Customer ID** (Keep track of which customer is the one purchasing)
* **Transaction ID** (Keep track of the transactions that is being done so customer and employee can work efficiently if there are any discrepancies)

Loyalty Customers

* **First Name** (Keep track of which customer is purchasing making it easier for the employee to sign them up for the loyalty program or search them up through the system)
* **Last Name** (Keep track of which customer is purchasing making it easier for the employee to sign them up for the loyalty program or search them up through the system)
* **Date Of Birth** (Keep track of when customers birthdays are so they can get a deal on shirts)
* **Address** (For online orders it is helpful to have so they can have shirts shipped to the address)
* **ID** (Keep track of which sale belongs to which customer)

Explanation

I am modeling a shirt store where the end application will be able to take customers cash and provide them the product that they paid for as well as track the quantity of shirts in the inventory as well keep track of the amount of customers that sign up for the loyalty program and who is working on the base level at the store. As well as give the option to customers to shop online and have that info saved to make an efficient shopping experience for the customer. Keep track of returns and verifying the customer that is returning is the one that is present with the receipt.