**Team 11 Business Rules Document for RC Company**

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|  |  |  |
| --- | --- | --- |
| Entity | Attributes | Relationship |
| Product | Product ID - PK |  |
|  | Product Desc |  |
|  | Vendor ID - FK |  |
|  | Category |  |
|  | Price |  |
|  | Availability |  |
|  |  |  |
| Decals | Decal ID-PK |  |
|  | Decal Desc |  |
|  | Product ID -FK | Multiple Decal IDs can come under one Product ID |
|  |  |  |
|  |  |  |
| Product backorder | Product ID- FK |  |
|  | Customer ID-FK |  |
|  | ProductBO-ID -PK |  |
|  |  |  |
| Customer | Customer ID - PK |  |
|  | Name |  |
|  | Contact |  |
|  | Customer Credit Card Info | This will include the cc number |
|  | Payment Info | This includes the credit card charges that will be sent to the bank along with credit card details( This will be 0 if there are no charges or it can be the total on the invoice) |
|  | Potential Customers- FK |  |
|  |  |  |
| Invoice | Invoice id - PK |  |
|  | Customer ID - FK |  |
|  | Product id - second PK |  |
|  | Shipping Charge/ Delivery cost |  |
|  | Product Price |  |
|  | Tax |  |
|  | Decal ID |  |
|  |  |  |
| Website Traffic | Customer ID - FK |  |
|  | Date |  |
|  | Time Spent |  |
|  | Cookie ID- PK |  |
|  |  |  |
| Inventory | Inventory ID - PK |  |
|  | Product ID - FK |  |
|  | Decal ID -FK |  |
|  | Units |  |
|  | Price per unit |  |
|  | Quantity on Hand |  |
|  | Minimum Quantity Required |  |
|  |  |  |
| Promotion | Promotions ID- PK |  |
|  | Customer ID-FK |  |
|  |  |  |
| Reports | Customer -ID | This will have multiple customer IDs separated by commas since multiple customers can buy one product |
|  | Reportid-PK |  |
|  | Product ID -FK |  |
|  | Product weekly turnover | This will include the weekly turnover of a product |
|  | Weekly Revenue by Product |  |
|  | Week | Week 1, Week2.., … Week 52 |
| Subscription | Customer ID-FK |  |
|  | Potential Customer ID-PK | They will get this from FineScale Modular magazine |
|  | Potential Customer Name |  |
|  | Potential Customer Contact Number |  |
|  | Potential Customer Email |  |
|  |  |  |
| Vendor | Vendor ID - PK |  |
|  | Vendor Name |  |
|  | Website Link |  |
|  | Product ID-FK |  |
|  | Decal ID-FK |  |
|  | Potential Vendor ID |  |
|  |  |  |
| Vendor Order | Vendor Order ID |  |
|  | Date |  |
|  | Transaction ID |  |
|  | Product ID -FK |  |
|  | Decal ID-FK |  |
|  | Shipping Cost |  |

Relationships, Assumptions and Business Rules –

1. Product has a 1 to many relationship with Inventory, Decals, Vendor, Vendor Orders, Reports, and Back orders.
2. Customer has a 1 to many relationship with Invoice, Subscriptions, Website traffic, Promotions and Reports.
3. A customer may generate many invoices.
4. Each invoice is generated by only one customer.
5. Potential customers should not have generated any invoice.
6. An invoice can have one or more products.
7. One customer can have multiple credit card numbers but each credit number must only be associated with one customer.
8. A product can be a part of many orders and each order can have many products.
9. Orders can only be placed as back orders if products are not available.
10. One customer can have multiple orders and back orders.
11. RC\_Models Company orders products from multiple manufacturers.
12. The manufacturers of products are different than the manufacturers that sell decals.
13. An invoice includes charges for one or more products or decals.
14. Payments are associated with a specific invoice and customer.
15. Promotional materials can be sent to customers or potential customers from the FineScale Modeler magazine subscription list.
16. People who have received promotions should be either on the customer list or the potential customer list.
17. A product is removed from inventory and scrapped if not sold within four weeks.
18. Reports will have weekly sales and turnover.
19. One product will have only a certain set of Decals.
20. One decal cannot be paired with more than one product.
21. Quantity on Hand cannot be less than the minimum quantity required.
22. All transactions are done by credit card.