Pokemon Procurement Center Database Design

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Our goal is to create a database for Pokemon Procurement Services (PPC) so that they can perform the main functions of their business with relative ease. This document will provide all the information necessary to implement this database for use of the PPC. The below section includes our mission statement for the database and the objectives for which the database was designed. Below the objectives is a list of our tables separated into entities and non-entities, and below each table name is the reason for why included the table in our design, and a brief mentioning of each field in that table. Further information on each field can be found in the field specification form for that specific field located in the appendix. Each field has been linked to the field specification that apply to it

Mission Statement

Our mission is to provide staff with up-to-date information to enable them to place Pokémon in healthy and happy homes.

Objectives

- Store customer orders and Pokémon sightings to fulfill orders for as many different Pokémon as possible.
- Record the last location of Pokémon.
- Keep track of costumes checked out/returned.
- Keep track of Pokémon orders as well as the Pokémon in our inventory (the ones that are staying at the procurement center already)

Tables and Rationale

I. Entities
- Customers
  - We included this table in our design so that we can keep track of everyone that has placed an order so that the company can view their information like phone number and address in case they need to get in touch.
  - **Fields:**
    - *Cust_id (PK)*
    - *Cust_firstname*
    - *Cust_lastname*
    - *Cust_Address*
    - *Cust_Phone*
- Staff
  - This table is included to keep track of the staff members working to search for the pokemon particularly because there is a costumes inventory rented out to staff members.

        - **Fields:**
            - *Staff_ID (PK)*
            - *Staff_FirstName*
            - *Staff_LastName*
    - Pokemon Inventory
        - We included this table in our design because it will keep track of the pokemon that we have at the Pokemon Procurement Center so that if a customer orders a pokemon that we already have on site, that information is readily available.
        - **Fields:**
            - *Inventory_ID (PK)*
            - *Pokemon_Name (FK)*
            - *Pokemon_Price*
    - Costumes_Inventory
        - We included this table because it keeps a track of all the costumes that the staff can rent and all the costumes that the company has purchased and are in the inventory. This table will help us when renting out costumes to our staff members.
        - **Fields:**
            - *Costume_ID (PK)*
            - *Costume_Type (FK)*
            - *Costume_Size*
    - Orders
        - We included this table in our design because it keeps track of orders and that will essentially help us serve our customers better and deliver all the pokemon each customer asked for, which is what our client wants. It links each customer to the pokemon that they want to buy.
        - **Fields:**
            - *Order_ID (PK)*
            - *Pokemon_Name (FK)*
            - *Customer_ID (FK)*
            - *Order_SoldFor*
    - Sightings
        - This table is included to keep track of where and when specific pokemon were sighted so that the staff will have a head start when they go out to search pokemon to fulfill customer orders.
        - Fields:
            - *Pokemon_Name (FK)*
            - *Sighting_Location*
            - *Sighting_Time*
            - *Sighting_NumPokemon*

II. Non-entities

- Pokemon
    - We included this table in our design because it is an entire list of all the pokemon in existence. It will be helpful for us to have so we can validate entries to other tables, to make sure that pokemon entered are on this list.
    - **Fields:**
        - *Pokemon_name (PK)*

        - *Pokemon_type*
- Costumes_Types
    - This table is included as it keeps track of all the possible costumes that can exist in our database. Doing so will prevent nonsensical data such as a random costume that does not make sense, for example, hugaagah costume. If we come across a problem with costume names not making sense, we can consult this table as it is validating all the costume names in the database.
    - **Fields:**
        - *Costume_Type (PK)*
- Costumes_Rented
    - This table is included to keep track of all of the costumes rented by the staff members, this will aid in the database by listing which costumes cannot be rented or when they might be able to be rented based on the rental due date
    - **Fields:**
        - *Costume_ID(PK)*
        - *Staff_ID (FK)*
        - *Rental_CheckoutDate*
        - *Rental_DueDate*
        - *Rental_ReturnedDate*

Business Rules

The following section covers which business rules we implemented into our design. Some of these business rules are also mentioned in the ER diagram in the appendix, and it is shown which design decisions in the ER diagram were changed by the business rules. Each business rule is linked to its respective business rule specification form located in the A3 section of the appendix.

1. Deletion of pokemon species that has been ordered, sighted, or exists in the inventory is forbidden.
2. Restrict staff members from being deleted if they have had costumes rented.
3. Deletion of costume types that are in the inventory is forbidden.
4. Costumes can be deemed inactive after being worn out, damaged, or taken out of service.
5. Each costume from the inventory can be rented to only one staff member at a time.
6. Number of Pokemon sighted has to be greater than 0.
7. Order SoldFor is greater than or equal to 0.
8. The costume's checkout date comes before the costume due date
9. The Costume's returned date comes after the costume's checkout date.
10. The sighting time must be before the current time.
11. A staff member can only rent five costumes at a time.

12. Once a customer has placed an order, the order cannot be deleted.
13. Once a pokemon has been bought, the pokemon cannot be deleted from the Pokemon_Inventory.
14. Pokemon_Price is greater than or equal to 0.

Appendix

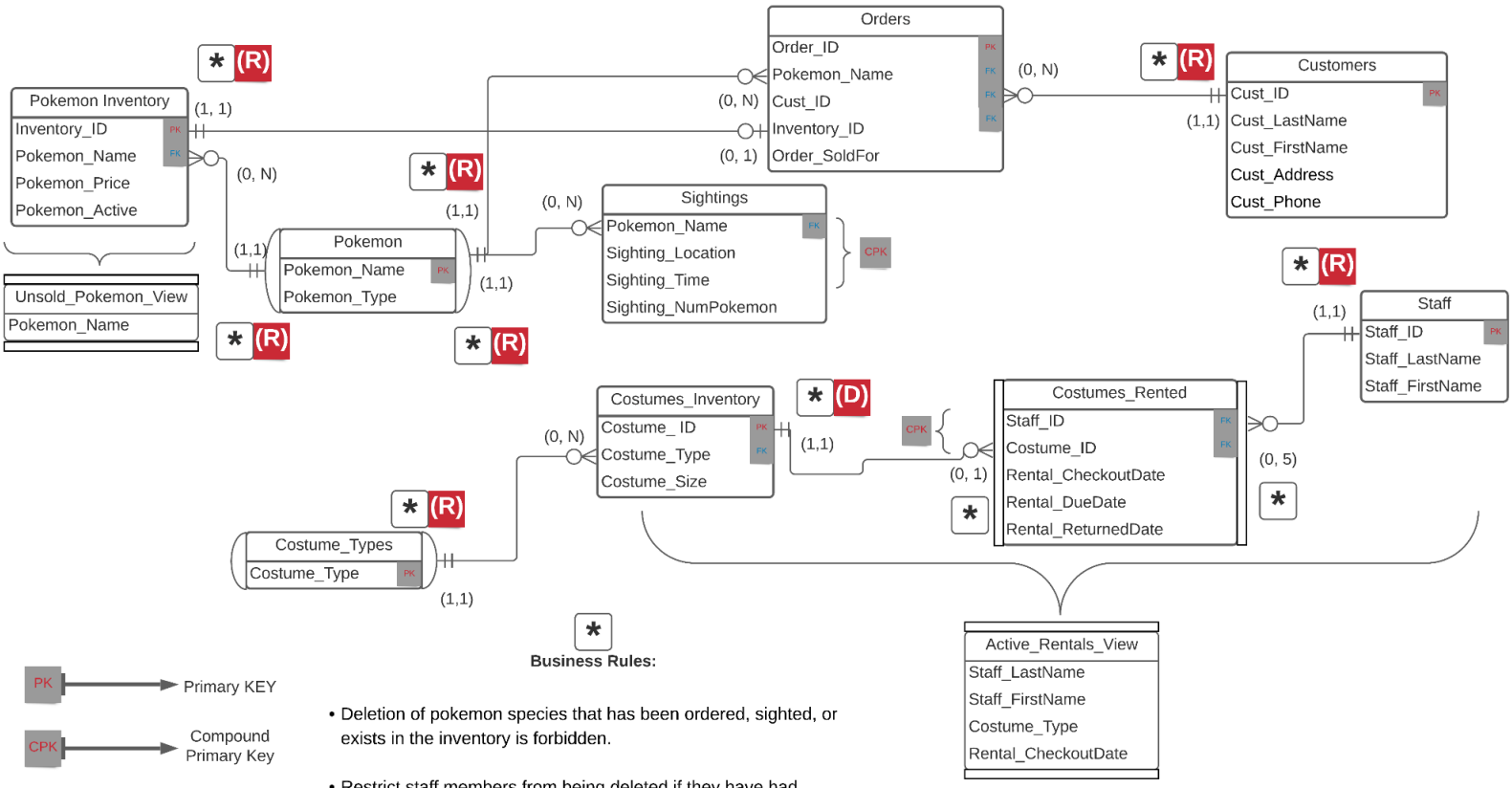
A1 ---------- ER Diagram

A2 ---------- Field Specification Forms

A3 ---------- Business Rule Specification Forms

In the appendix, you will find the documentation necessary to implement this database. In A1, the ER diagram illustrates the relationships between each of the tables in the database, including the degree of participation, the manner of participation, as well as the deletion rules for each relationship. In A2, there are all of the field specification forms, which document the characteristics and limitations of each field in each table. Finally, in A3, there are all of the business rule specifications, which go into detail about what effect and constraints that were imposed on our design by each business rule.

A1:
ER DIAGRAM



PK → Primary KEY

CPK → Compound Primary Key

FK → Foreign KEY

(D) → Deny Deletion Rule

(R) → Restrict Deletion Rule

* → Check Business Rules

Business Rules:

- Deletion of pokemon species that has been ordered, sighted, or exists in the inventory is forbidden.
- Restrict staff members from being deleted if they have had costumes rented.
- Deletion of costume types that are in the inventory is forbidden.
- Costumes can be deemed inactive after being worn out, damaged, or taken out of service.
- Each costume from the inventory can be rented to only one staff member at a time.
- A staff member can only rent five costumes at a time.
- Once a customer has placed an order, the order cannot be deleted.
- Once a pokemon has been bought, the pokemon cannot be deleted from the Pokemon_Inventory.

A2: FIELD SPECIFICATION FORMS

GENERAL ELEMENTS

Field Name: **Pokemon.Pokemon_Name**

Specification Type:
- Unique: X
- Generic: _
- Replica: _

Parent Table: Pokemon
Label: _
Source Specification: _
Shared By: Orders, Sightings, Pokemon_Inventory
Aliases: _
Description: The name of a species of Pokemon

PHYSICAL ELEMENTS

Data Type: VARCHAR(15)
Length: 15
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
- Letters (A-Z): X
- Numbers (0-9): _
- Keyboard (.,/$#%): _
- Special (©®™Σπ): X

LOGICAL ELEMENTS

Key Type: Non: _ Primary: X Foreign: _ Alternate: _

Key Structure: Simple: X Composite: _

Uniqueness: Non-unique: _ Unique: X

Null Support: Nulls OK: _ No nulls: X

Values Entered By: User: X System: _

Required Value: No: _ Yes: X

Default Value: _

Range of Values: _

Edit Rule:
- Enter now, edits allowed: _
- Enter now, edits not allowed: X
- Enter later, edits allowed: _
- Enter later, edits not allowed: _
- Not determined at this time: _

Comparisons Allowed:
- Same Field: _ ALL _ = _ > _ >= _ != _ < _ <= _
- Other Fields: _ ALL _ = X > _ >= _ != X < _ <= _
- Value Expr.: _ ALL _ = X > _ >= _ != X < _ <= _

Operations Allowed:
- Same Field: _ ALL _ + _ - _ * _ / _
- Other Fields: _ ALL _ + _ - _ * _ / _
- Value Expr.: _ ALL _ + _ - _ * _ / _

GENERAL ELEMENTS

Field Name: **Pokemon.Pokemon_Type**

Specification Type:
- Unique: _
- Generic: X
- Replica: _

Parent Table: Pokemon
Label: Type
Source Specification: _
Shared By: _
Aliases: _
Description: The Pokemon type refers to the different elemental properties associated with Pokemon.

PHYSICAL ELEMENTS

Data Type: VARCHAR(10)
Length: 10 Characters
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
- Letters (A-Z): X
- Numbers (0-9): _
- Keyboard (.,/$#%): _
- Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: X; Primary: _; Foreign: _; Alternate: _

Key Structure: Simple: _; Composite: _

Uniqueness: Non-unique: X; Unique: _

Null Support: Nulls OK: _; No nulls: X

Values Entered By: User: X; System: _

Required Value: No: _; Yes: X

Default Value: _

Range of Values: (Normal, Fire, Water, Grass, Flying, Fighting, Poison, Electric, Ground, Rock, Psychic, Ice, Bug, Ghost, Steel, Dragon, Dark, Fairy)

Edit Rule:

Enter now, edits allowed: _
Enter now, edits not allowed: X
Enter later, edits allowed: _
Enter later, edits not allowed: _
Not determined at this time: _

Comparisons Allowed:

Same Field:

ALL	_
=	X
>	_
>=	_
!=	X
<	_
<=	_

Other Fields: _

ALL	_
=	_
>	_
>=	_
!=	_
<	_
<=	_

Value Expr.: _

ALL	_
=	_
>	_
>=	_
!=	_
<	_
<=	_

Operations Allowed:

Same Field: _

ALL	_
+	_
-	_
*	_
/	_

Other Fields: _

ALL	_
+	_
-	_
*	_
/	_

Value Expr.: _

ALL	_
+	_
-	_
*	_
/	_

NOTES:

GENERAL ELEMENTS

```
Field Name:           Customers.Cust_ID                          ALL  _
                                                                 =    X
Specification Type:                                              >    _
  Unique:  X                                                     >=   _
  Generic: _                                                     !=   X
  Replica: _                                                     <    _
Parent Table:         Customers                                  <=   _
Label:                ID
Source Specification: _                            Other Fields: _
Shared By:            Orders                                     ALL  _
Aliases:              _                                          =    _
Description:          The unique                                 >    _
identifying number given to each customer                        >=   _
                                                                 !=   _
                                                                 <    _
PHYSICAL ELEMENTS                                                <=   _

Data Type:            INT                          Value Expr.:  _
Length:               _                                          ALL  _
Decimal Places:       _                                          =    X
Input Mask:           _                                          >    _
Display Format:       _                                          >=   _
Character Support:                                               !=   X
  Letters (A-Z):      _                                          <    _
  Numbers (0-9):      X                                          <=   _
  Keyboard (.,/$#%):  _
  Special (©®™Σπ):    _                          Operations Allowed:
                                                   Same Field:   _
                                                                 ALL  _
LOGICAL ELEMENTS                                                 +    _
                                                                 -    _
Key Type:      Non:        _                                     *    _
               Primary:    X                                     /    _
               Foreign:    _
               Alternate:  _                       Other Fields: _
                                                                 ALL  _
Key Structure: Simple:     X                                     +    _
               Composite:  _                                     -    _
                                                                 *    _
Uniqueness:    Non-unique: _                                     /    _
               Unique:     X
                                                   Value Expr.:  _
Null Support:  Nulls OK:   _                                     ALL  _
               No nulls:   X                                     +    _
                                                                 -    _
Values Entered By: User:   _                                     *    _
                   System: X                                     /    _

Required Value:    No:     _                      NOTES:
                   Yes:    X

Default Value:     _

Range of Values:   _

Edit Rule:
  Enter now, edits allowed:       _
  Enter now, edits not allowed:   X
  Enter later, edits allowed:     _
  Enter later, edits not allowed: _
  Not determined at this time:    _

Comparisons Allowed:
  Same Field:   _
```

GENERAL ELEMENTS

Field Name:
Customers.Cust_LastName

Specification Type:
  Unique: _
  Generic: X
  Replica: _
Parent Table: Customers
Label: Name
Source Specification: Person Name
Shared By: _
Aliases: _
Description: The last name of the customer.

PHYSICAL ELEMENTS

Data Type: VARCHAR(25)
Length: 25 Characters
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): X
  Numbers (0-9): _
  Keyboard (.,/$#%): _
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: X
Primary: _
Foreign: _
Alternate: _

Key Structure: Simple: _
Composite: _

Uniqueness: Non-unique: X
Unique: _

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: X
System: _

Required Value: No: _
Yes: X

Default Value: _

Range of Values: _

Edit Rule:
  Enter now, edits allowed: X
  Enter now, edits not allowed: _
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _
ALL X
= _
> _
>= _
!= _
< _
<= _

  Other Fields: _
ALL _
= _
> _
>= _
!= _
< _
<= _

  Value Expr.: _
ALL _
= _
> _
>= _
!= _
< _
<= _

Operations Allowed:
  Same Field: _
ALL _
+ _
- _
* _
/ _

  Other Fields: _
ALL _
+ _
- _
* _
/ _

  Value Expr.: _
ALL _
+ _
- _
* _
/ _

NOTES:

GENERAL ELEMENTS

Field Name:
Customers.Cust_FirstName

Specification Type:
  Unique: _
  Generic: X
  Replica: _
Parent Table: Customers
Label: _
Source Specification: Person Name
Shared By: _
Aliases: _
Description: The first name of the customer.

PHYSICAL ELEMENTS

Data Type: VARCHAR(25)
Length: 25 Characters
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): X
  Numbers (0-9): _
  Keyboard (.,/$#%): _
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: X
Primary: _
Foreign: _
Alternate: _

Key Structure: Simple: _
Composite: _

Uniqueness: Non-unique: X
Unique: _

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: X
System: _

Required Value: No: _
Yes: X

Default Value: _

Range of Values: _

Edit Rule:
  Enter now, edits allowed: X
  Enter now, edits not allowed: _
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _
ALL X
= _
> _
>= _
!= _
< _
<= _

  Other Fields: _
ALL _
= _
> _
>= _
!= _
< _
<= _

  Value Expr.: _
ALL _
= _
> _
>= _
!= _
< _
<= _

Operations Allowed:
  Same Field: _
ALL _
+ _
- _
* _
/ _

  Other Fields: _
ALL _
+ _
- _
* _
/ _

  Value Expr.: _
ALL _
+ _
- _
* _
/ _

NOTES:

```
GENERAL ELEMENTS

Field Name:           Customers.Cust_Address

Specification Type:
  Unique:  _
  Generic: X
  Replica: _
Parent Table:         Customers
Label:                Address
Source Specification: Address
Shared By:            _
Aliases:              _
Description:          The home street
address of the customer


PHYSICAL ELEMENTS

Data Type:            VARCHAR(50)
Length:               50 Characters
Decimal Places:       _
Input Mask:           _
Display Format:       _
Character Support:
  Letters (A-Z):      X
  Numbers (0-9):      X
  Keyboard (.,/$#%):  X
  Special (©®™Σπ):    _


LOGICAL ELEMENTS

Key Type:      Non:        X
               Primary:    _
               Foreign:    _
               Alternate:  _

Key Structure: Simple:     _
               Composite:  _

Uniqueness:    Non-unique: X
               Unique:     _

Null Support:  Nulls OK:   _
               No nulls:   X

Values Entered By: User:   X
                   System: _

Required Value:    No:     _
                   Yes:    X

Default Value:     _

Range of Values:   _

Edit Rule:
  Enter now, edits allowed:       X
  Enter now, edits not allowed:   _
  Enter later, edits allowed:     _
  Enter later, edits not allowed: _
  Not determined at this time:    _
```

```
Comparisons Allowed:
  Same Field:   _
                ALL  _
                =    X
                >    _
                >=   _
                !=   X
                <    _
                <=   _

  Other Fields: _
                ALL  _
                =    _
                >    _
                >=   _
                !=   _
                <    _
                <=   _

  Value Expr.:  _
                ALL  _
                =    _
                >    _
                >=   _
                !=   _
                <    _
                <=   _

Operations Allowed:
  Same Field:   _
                ALL  _
                +    _
                -    _
                *    _
                /    _

  Other Fields: _
                ALL  _
                +    _
                -    _
                *    _
                /    _

  Value Expr.:  _
                ALL  _
                +    _
                -    _
                *    _
                /    _

NOTES:
```

```
GENERAL ELEMENTS

Field Name:           Customers.Cust_Phone

Specification Type:
  Unique:  X
  Generic: _
  Replica: _
Parent Table:         Customers
Label:                Phone #
Source Specification: Phone Number
Shared By:            _
Aliases:              _
Description:          The main phone number
of the customer


PHYSICAL ELEMENTS

Data Type:            VARCHAR(20)
Length:               20 Characters
Decimal Places:       _
Input Mask:           +1 (###) ###-####
Display Format:       _
Character Support:
  Letters (A-Z):      _
  Numbers (0-9):      X
  Keyboard (.,/$#%):  X
  Special (©®™Σπ):    _


LOGICAL ELEMENTS

Key Type:      Non:        X
               Primary:    _
               Foreign:    _
               Alternate:  _

Key Structure: Simple:     _
               Composite:  _

Uniqueness:    Non-unique: X
               Unique:     _

Null Support:  Nulls OK:   X
               No nulls:   _

Values Entered By: User:   X
                   System: _

Required Value:    No:     X
                   Yes:    _

Default Value:     _

Range of Values:   _

Edit Rule:
  Enter now, edits allowed:       _
  Enter now, edits not allowed:   _
  Enter later, edits allowed:     X
  Enter later, edits not allowed: _
  Not determined at this time:    _
```

```
Comparisons Allowed:
  Same Field:   _
                ALL  _
                =    _
                >    _
                >=   _
                !=   _
                <    _
                <=   _

  Other Fields: _
                ALL  _
                =    _
                >    _
                >=   _
                !=   _
                <    _
                <=   _

  Value Expr.:  _
                ALL  _
                =    _
                >    _
                >=   _
                !=   _
                <    _
                <=   _

Operations Allowed:
  Same Field:   _
                ALL  _
                +    _
                -    _
                *    _
                /    _

  Other Fields: _
                ALL  _
                +    _
                -    _
                *    _
                /    _

  Value Expr.:  _
                ALL  _
                +    _
                -    _
                *    _
                /    _

NOTES:
```

GENERAL ELEMENTS

Field Name:
Pokemon_Inventory.Inventory_ID

Specification Type:
  Unique: X
  Generic: _
  Replica: _
Parent Table: Pokemon_Inventory
Label: ID
Source Specification: _
Shared By: _
Aliases: _
Description: The unique key that corresponds to each pokemon in inventory at the PPC.

PHYSICAL ELEMENTS

Data Type: INT
Length: _
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): _
  Numbers (0-9): X
  Keyboard (.,/$#%): _
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: _
Primary: X
Foreign: _
Alternate: _

Key Structure: Simple: X
Composite: _

Uniqueness: Non-unique: _
Unique: X

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: _
System: X

Required Value: No: _
Yes: X

Default Value: _

Range of Values: _

Edit Rule:
  Enter now, edits allowed: _
  Enter now, edits not allowed: X
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _
ALL _
= X
> _
>= _
!= X
< _
<= _

  Other Fields: _
ALL _
= _
> _
>= _
!= _
< _
<= _

  Value Expr.: _
ALL _
= _
> _
>= _
!= _
< _
<= _

Operations Allowed:
  Same Field: _
ALL _
+ _
- _
* _
/ _

  Other Fields: _
ALL _
+ _
- _
* _
/ _

  Value Expr.: _
ALL _
+ _
- _
* _
/ _

NOTES:

GENERAL ELEMENTS

Field Name:
Pokemon_Inventory.Pokemon_Name

Specification Type:
  Unique: _
  Generic: _
  Replica: X
Parent Table: Pokemon_Inventory
Label: Species
Source Specification: Species
Shared By: Pokemon_Validation, Pokemon_Inventory, Orders, Sightings
Aliases: _
Description: The name of the pokemon species that is in the inventory.

PHYSICAL ELEMENTS

Data Type: VARCHAR(15)
Length: 15
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): X
  Numbers (0-9): _
  Keyboard (.,/$#%): _
  Special (©®™Σπ): X

LOGICAL ELEMENTS

Key Type: Non: _
Primary: _
Foreign: X
Alternate: _

Key Structure: Simple: X
Composite: _

Uniqueness: Non-unique: X
Unique: _

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: _
System: X

Required Value: No: _
Yes: X

Default Value: _

Range of Values: _

Edit Rule:
  Enter now, edits allowed: _
  Enter now, edits not allowed: X
  Enter later, edits allowed: _
  Enter later, edits not allowed: _

Not determined at this time: _

Comparisons Allowed:
  Same Field: _

ALL	_
=	X
>	_
>=	_
!=	X
<	_
<=	_

  Other Fields: _

ALL	_
=	X
>	_
>=	_
!=	X
<	_
<=	_

  Value Expr.: _

ALL	_
=	_
>	_
>=	_
!=	_
<	_
<=	_

Operations Allowed:
  Same Field: _

ALL	_
+	_
-	_
*	_
/	_

  Other Fields: _

ALL	_
+	_
-	_
*	_
/	_

  Value Expr.: _

ALL	_
+	_
-	_
*	_
/	_

NOTES:

GENERAL ELEMENTS

Field Name:
Pokemon_Inventory.Pokemon_Price

Specification Type:
  Unique: _
  Generic: X
  Replica: _
Parent Table: Pokemon_Inventory
Label: Price
Source Specification: Price
Shared By: _
Aliases: _
Description: The price that the pokemon in the inventory is set to be sold for.

PHYSICAL ELEMENTS

Data Type: FLOAT
Length: _
Decimal Places: 2
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): _
  Numbers (0-9): X
  Keyboard (.,/$#%): X
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: X
Primary: _
Foreign: _
Alternate: _

Key Structure: Simple: _
Composite: _

Uniqueness: Non-unique: X
Unique: _

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: X
System: X

Required Value: No: _
Yes: X

Default Value: _

Range of Values: _

Edit Rule:
  Enter now, edits allowed: _
  Enter now, edits not allowed: X
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _
ALL X
= _
> _
>= _
!= _
< _
<= _

  Other Fields: Order_SoldFor in Orders table.
ALL X
= _
> _
>= _
!= _
< _
<= _

  Value Expr.: _
ALL _
= _
> _
>= _
!= _
< _
<= _

Operations Allowed:
  Same Field: _
ALL X
+ _
- _
* _
/ _

  Other Fields: Order_SoldFor in Orders table.
ALL X
+ _
- _
* _
/ _

  Value Expr.: _
ALL _
+ _
- _
* _
/ _

NOTES:

GENERAL ELEMENTS

Field Name: **Orders.Order_ID**

Specification Type:
  Unique: X
  Generic: _
  Replica: _
Parent Table: Orders
Label: ID
Source Specification: _
Shared By: _
Aliases: _
Description: The primary key that identifies the order in the orders table.

PHYSICAL ELEMENTS

Data Type: INT
Length: _
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): _
  Numbers (0-9): X
  Keyboard (.,/$#%): _
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: _
Primary: X
Foreign: _
Alternate: _

Key Structure: Simple: X
Composite: _

Uniqueness: Non-unique: _
Unique: X

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: _
System: X

Required Value: No: _
Yes: X

Default Value: _

Range of Values: _

Edit Rule:
  Enter now, edits allowed: _
  Enter now, edits not allowed: X
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _
ALL _
= X
> _
>= _
!= X
< _
<= _

  Other Fields: _
ALL _
= _
> _
>= _
!= _
< _
<= _

  Value Expr.: _
ALL _
= _
> _
>= _
!= _
< _
<= _

Operations Allowed:
  Same Field: _
ALL _
+ _
- _
* _
/ _

  Other Fields: _
ALL _
+ _
- _
* _
/ _

  Value Expr.: _
ALL _
+ _
- _
* _
/ _

NOTES:

GENERAL ELEMENTS

Field Name: **Orders.Pokemon_Name**

Specification Type:
- Unique: _
- Generic: _
- Replica: X

Parent Table: Orders
Label: Species
Source Specification: Species
Shared By: Pokemon, Pokemon_Inventory, Orders, Sightings
Aliases: _
Description: The name of the pokemon species that is being ordered.

PHYSICAL ELEMENTS

Data Type: VARCHAR(15)
Length: 15
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
- Letters (A-Z): X
- Numbers (0-9): _
- Keyboard (.,/$#%): _
- Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: _ Primary: _ Foreign: X Alternate: _

Key Structure: Simple: X Composite: _

Uniqueness: Non-unique: X Unique: _

Null Support: Nulls OK: _ No nulls: X

Values Entered By: User: _ System: X

Required Value: No: _ Yes: X

Default Value: _

Range of Values: _

Edit Rule:
- Enter now, edits allowed: _
- Enter now, edits not allowed: X
- Enter later, edits allowed: _
- Enter later, edits not allowed: _
- Not determined at this time: _

Comparisons Allowed:

Same Field:

ALL	_
=	X
>	_
>=	_
!=	X
<	_
<=	_

Other Fields: _

ALL	_
=	X
>	_
>=	_
!=	X
<	_
<=	_

Value Expr.: _

ALL	_
=	_
>	_
>=	_
!=	_
<	_
<=	_

Operations Allowed:

Same Field: _

ALL	_
+	_
-	_
*	_
/	_

Other Fields: _

ALL	_
+	_
-	_
*	_
/	_

Value Expr.: _

ALL	_
+	_
-	_
*	_
/	_

NOTES:

GENERAL ELEMENTS

Field Name: **Orders.Customer_ID**

Specification Type:
- Unique: _
- Generic: _
- Replica: X

Parent Table: Orders
Label: ID
Source Specification: _
Shared By: Customers
Aliases: _
Description: The customer id that identifies which customer the order is by.

PHYSICAL ELEMENTS

Data Type: INT
Length: _
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
- Letters (A-Z): _
- Numbers (0-9): X
- Keyboard (.,/$#%): _
- Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: _ Primary: _ Foreign: X Alternate: _

Key Structure: Simple: X Composite: _

Uniqueness: Non-unique: X Unique: _

Null Support: Nulls OK: _ No nulls: X

Values Entered By: User: _ System: X

Required Value: No: _ Yes: X

Default Value: _

Range of Values: _

Edit Rule:
- Enter now, edits allowed: _
- Enter now, edits not allowed: X
- Enter later, edits allowed: _
- Enter later, edits not allowed: _
- Not determined at this time: _

Comparisons Allowed:

Same Field:

ALL	_
=	X
>	_
>=	_
!=	X
<	_
<=	_

Other Fields: _

ALL	_
=	X
>	_
>=	_
!=	X
<	_
<=	_

Value Expr.: _

ALL	_
=	_
>	_
>=	_
!=	_
<	_
<=	_

Operations Allowed:

Same Field: _

ALL	_
+	_
-	_
*	_
/	_

Other Fields: _

ALL	_
+	_
-	_
*	_
/	_

Value Expr.: _

ALL	_
+	_
-	_
*	_
/	_

NOTES:

FIELD SPECIFICATIONS

GENERAL ELEMENTS

Field Name: **Orders.Inventory_ID**

Specification Type:
  Unique: _
  Generic: _
  Replica: X
Parent Table: Orders
Label:
Source Specification: _
Shared By: Pokemon_Inventory
Aliases: _
Description: If an order is filled, this column will be filled with the inventory ID number associated with the pokemon given on the order.

PHYSICAL ELEMENTS

Data Type: INT
Length: _
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): _
  Numbers (0-9): X
  Keyboard (.,/$#%): _
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: _
Primary: _
Foreign: X
Alternate: _

Key Structure: Simple: X
Composite: _

Uniqueness: Non-unique: _
Unique: X

Null Support: Nulls OK: X
No nulls: _

Values Entered By: User: _
System: X

Required Value: No: X
Yes: _

Default Value: _

Range of Values: _

Edit Rule:
  Enter now, edits allowed: X
  Enter now, edits not allowed: _
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _
ALL _
= X
> _
>= _
!= X
< _
<= _
  Other Fields: _
ALL _
= X
> _
>= _
!= X
< _
<= _

  Value Expr.: _
ALL _
= _
> _
>= _
!= _
< _
<= _

Operations Allowed:
  Same Field: _
ALL _
+ _
- _
* _
/ _
  Other Fields: _
ALL _
+ _
- _
* _
/ _
  Value Expr.: _
ALL _
+ _
- _
* _
/ _

NOTES:

GENERAL ELEMENTS

Field Name: **Orders.Order_SoldFor**

Specification Type:
  Unique: _
  Generic: X
  Replica: _
Parent Table: Orders
Label: Price
Source Specification: Price
Shared By: _
Aliases: _
Description: The price that the customer paid for the pokemon they wanted.

PHYSICAL ELEMENTS

Data Type: FLOAT
Length: _
Decimal Places: 2
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): _
  Numbers (0-9): X
  Keyboard (.,/$#%): X
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: X
Primary: _
Foreign: _
Alternate: _

Key Structure: Simple: _
Composite: _

Uniqueness: Non-unique: X
Unique: _

Null Support: Nulls OK: X
No nulls: _

Values Entered By: User: X
System: _

Required Value: No: X
Yes: _

Default Value: NULL

Range of Values: _

Edit Rule:
  Enter now, edits allowed: _
  Enter now, edits not allowed: _
  Enter later, edits allowed: _
  Enter later, edits not allowed: X
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _
ALL X
= _
> _
>= _
!= _
< _
<= _

  Other Fields: Pokemon_Price in Pokemon_Inventory
ALL X
= _
> _
>= _
!= _
< _
<= _

  Value Expr.: _
ALL _
= _
> _
>= _
!= _
< _
<= _

Operations Allowed:
  Same Field: _
ALL X
+ _
- _
* _
/ _

  Other Fields: Pokemon_Price in Pokemon_Inventory
ALL X
+ _
- _
* _
/ _

  Value Expr.: _
ALL _
+ _
- _
* _
/ _

NOTES:

GENERAL ELEMENTS

Field Name:
Costumes_Inventory.Costume_ID

Specification Type:
  Unique: X
  Generic: _
  Replica: _
Parent Table: Costumes_Inventory
Label: _
Source Specification: _
Shared By: Costumes_Rented
Aliases: _
Description: The unique id of the costume that is in the inventory.

PHYSICAL ELEMENTS

Data Type: INT
Length: _
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): _
  Numbers (0-9): X
  Keyboard (.,/$#%): _
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: _
Primary: X
Foreign: _
Alternate: _

Key Structure: Simple: X
Composite: _

Uniqueness: Non-unique: _
Unique: X

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: _
System: X

Required Value: No: _
Yes: X

Default Value: _

Range of Values: _

Edit Rule:
  Enter now, edits allowed: _
  Enter now, edits not allowed: X
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _
ALL _
= X
> _
>= _
!= X
< _
<= _
  Other Fields: _
ALL _
= X
> _
>= _
!= X
< _
<= _
  Value Expr.: _
ALL _
= _
> _
>= _
!= _
< _
<= _

Operations Allowed:
  Same Field: _
ALL _
+ _
- _
* _
/ _
  Other Fields: _
ALL _
+ _
- _
* _
/ _
  Value Expr.: _
ALL _
+ _
- _
* _
/ _

NOTES:

GENERAL ELEMENTS

Field Name:
Costumes_Inventory.Costume_Type

Specification Type:
  Unique: _
  Generic: _
  Replica: X
Parent Table: Costumes_Inventory
Label: Type of Costume
Source Specification: Costume Type
Shared By: Costumes_Types
Aliases: _
Description: A foreign key that is a string to help identify all the various costume types, such as a Gyarados costume.

PHYSICAL ELEMENTS

Data Type: VARCHAR(30)
Length: 30
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): X
  Numbers (0-9): X
  Keyboard (.,/$#%): X
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: _
Primary: _
Foreign: X
Alternate: _

Key Structure: Simple: X
Composite: _

Uniqueness: Non-unique: X
Unique: _

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: _
System: X

Required Value: No: _
Yes: X

Default Value: _

Range of Values: _

Edit Rule:
  Enter now, edits allowed: _
  Enter now, edits not allowed: X
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _
ALL _
= X
> _
>= _
!= X
< _
<= _

  Other Fields: _
ALL _
= _
> _
>= _
!= _
< _
<= _

  Value Expr.: _
ALL _
= _
> _
>= _
!= _
< _
<= _

Operations Allowed:
  Same Field: _
ALL _
+ _
- _
* _
/ _

  Other Fields: _
ALL _
+ _
- _
* _
/ _

  Value Expr.: _
ALL _
+ _
- _
* _
/ _

NOTES:

GENERAL ELEMENTS

Field Name:
Costumes_Inventory.Costume_Size

Specification Type:
  Unique: _
  Generic: X
  Replica: _
Parent Table: Costumes_Inventory
Label: Size
Source Specification: Costume Size
Shared By: _
Aliases: _
Description: The size of the costume in the inventory.

PHYSICAL ELEMENTS

Data Type: VARCHAR(5)
Length: 5
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): X
  Numbers (0-9): _
  Keyboard (.,/$#%): _
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: X
Primary: _
Foreign: _
Alternate: _

Key Structure: Simple: _
Composite: _

Uniqueness: Non-unique: X
Unique: _

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: X
System: _

Required Value: No: _
Yes: X

Default Value: _

Range of Values: _

Edit Rule:
  Enter now, edits allowed: X
  Enter now, edits not allowed: _
  Enter later, edits allowed: X
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _
ALL X
= _
> _
>= _
!= _
< _
<= _

  Other Fields: _
ALL _
= _
> _
>= _
!= _
< _
<= _

  Value Expr.: _
ALL _
= _
> _
>= _
!= _
< _
<= _

Operations Allowed:
  Same Field: _
ALL _
+ X
- X
* _
/ _

  Other Fields: _
ALL _
+ _
- _
* _
/ _

  Value Expr.: _
ALL _
+ _
- _
* _
/ _

NOTES:

GENERAL ELEMENTS

Field Name:
Costume_Types.Costume_Type

Specification Type:
  Unique: X
  Generic: _
  Replica: _
Parent Table: Costume_Types
Label: Type of Costume
Source Specification: Costume Type
Shared By: Costumes_Inventory
Aliases: _
Description: A primary key that is a string to help identify all the various costume types, such as a Gyarados costume.

PHYSICAL ELEMENTS

Data Type: VARCHAR(30)
Length: 30
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): X
  Numbers (0-9): X
  Keyboard (.,/$#%): X
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: _
Primary: X
Foreign: _
Alternate: _

Key Structure: Simple: X
Composite: _

Uniqueness: Non-unique: _
Unique: X

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: _
System: X

Required Value: No: _
Yes: X

Default Value: _

Range of Values: _

Edit Rule:
  Enter now, edits allowed: _
  Enter now, edits not allowed: X
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _
ALL _
= _
> _
>= _
!= _
< _
<= _

  Other Fields: _
ALL _
= X
> _
>= _
!= X
< _
<= _

  Value Expr.: _
ALL _
= _
> _
>= _
!= _
< _
<= _

Operations Allowed:
  Same Field: _
ALL _
+ _
- _
* _
/ _

  Other Fields: _
ALL _
+ _
- _
* _
/ _

  Value Expr.: _
ALL _
+ _
- _
* _
/ _

NOTES:

GENERAL ELEMENTS

Field Name:
Costumes_Rented.Staff_ID

Specification Type:
  Unique: _
  Generic: _
  Replica: X
Parent Table: Costumes_Rented
Label: _
Source Specification: Staff_Members
Shared By: Staff
Aliases: _
Description: The id that corresponds to a staff member in the staff table, to link the costume to which staff rented it out.

PHYSICAL ELEMENTS

Data Type: INT
Length: _
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): _
  Numbers (0-9): X
  Keyboard (.,/$#%): _
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: _
Primary: _
Foreign: X
Alternate: _

Key Structure: Simple: _
Composite: X

Uniqueness: Non-unique: X
Unique: _

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: _
System: X

Required Value: No: _
Yes: X

Default Value: _

Range of Values: _

Edit Rule:
  Enter now, edits allowed: _
  Enter now, edits not allowed: X
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _

ALL	_
=	X
>	_
>=	_
!=	X
<	_
<=	_

  Other Fields: _

ALL	_
=	X
>	_
>=	_
!=	X
<	_
<=	_

  Value Expr.: _

ALL	_
=	_
>	_
>=	_
!=	_
<	_
<=	_

Operations Allowed:
  Same Field: _

ALL	_
+	_
-	_
*	_
/	_

  Other Fields: _

ALL	_
+	_
-	_
*	_
/	_

  Value Expr.: _

ALL	_
+	_
-	_
*	_
/	_

NOTES:

GENERAL ELEMENTS

Field Name:
Costumes_Rented.Costume_ID

Specification Type:
  Unique: _
  Generic: _
  Replica: X
Parent Table: Costumes_Rented
Label: _
Source Specification: _
Shared By: Costumes_Inventory
Aliases: _
Description: The unique id of the costume that is rented out.

PHYSICAL ELEMENTS

Data Type: INT
Length: _
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): _
  Numbers (0-9): X
  Keyboard (.,/$#%): _
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: _
Primary: _
Foreign: X
Alternate: _

Key Structure: Simple: _
Composite: X

Uniqueness: Non-unique: X
Unique: _

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: _
System: X

Required Value: No: _
Yes: X

Default Value: _

Range of Values: _

Edit Rule:
  Enter now, edits allowed: _
  Enter now, edits not allowed: X
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _
ALL _
= X
> _
>= _
!= X
< _
<= _

  Other Fields: _
ALL _
= X
> _
>= _
!= X
< _
<= _

  Value Expr.: _
ALL _
= _
> _
>= _
!= _
< _
<= _

Operations Allowed:
  Same Field: _
ALL _
+ _
- _
* _
/ _

  Other Fields: _
ALL _
+ _
- _
* _
/ _

  Value Expr.: _
ALL _
+ _
- _
* _
/ _

NOTES:

GENERAL ELEMENTS

Field Name:
Costumes_Rented.Rental_CheckoutDate

Specification Type:
  Unique: _
  Generic: X
  Replica: _
Parent Table: Costume_Rented
Label: Checkout Date
Source Specification: Date
Shared By: _
Aliases: _
Description: The time and date that the costume was checked out by.

PHYSICAL ELEMENTS

Data Type: TIMESTAMP
Length: 365
Decimal Places: _
Input Mask: Date input box with MM-DD-YYYY
Display Format: _
Character Support:
  Letters (A-Z): _
  Numbers (0-9): X
  Keyboard (.,/$#%): _
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: X
Primary: _
Foreign: _
Alternate: _

Key Structure: Simple: _
Composite: _

Uniqueness: Non-unique: _
Unique: _

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: _
System: X

Required Value: No: X
Yes: _

Default Value: CURRENT TIMESTAMP

Range of Values: Every day in the year.

Edit Rule:
  Enter now, edits allowed: X
  Enter now, edits not allowed: _
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _

ALL	X
=	_
>	_
>=	_
!=	_
<	_
<=	_

  Other Fields: _

ALL	X
=	_
>	_
>=	_
!=	_
<	_
<=	_

  Value Expr.: _

ALL	X
=	_
>	_
>=	_
!=	_
<	_
<=	_

Operations Allowed:
  Same Field: _

ALL	_
+	X
-	X
*	_
/	_

  Other Fields: _

ALL	_
+	X
-	X
*	_
/	_

  Value Expr.: _

ALL	_
+	X
-	X
*	_
/	_

NOTES:

GENERAL ELEMENTS

Field Name:
Costumes_Rented.Rental_DueDate

Specification Type:
  Unique: _
  Generic: X
  Replica: _
Parent Table: Costumes_Rented
Label: Return By
Source Specification: Date
Shared By: _
Aliases: _
Description: The date and time that the costume is to be returned by.

PHYSICAL ELEMENTS

Data Type: TIMESTAMP
Length: _
Decimal Places: _
Input Mask: Date input box with MM-DD-YYYY
Display Format: _
Character Support:
  Letters (A-Z): _
  Numbers (0-9): X
  Keyboard (.,/$#%): _
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: X
Primary: _
Foreign: _
Alternate: _

Key Structure: Simple: _
Composite: _

Uniqueness: Non-unique: X
Unique: _

Null Support: Nulls OK: X
No nulls: _

Values Entered By: User: X
System: _

Required Value: No: X
Yes: _

Default Value: _

Range of Values: Every day in the year.

Edit Rule:
  Enter now, edits allowed: X
  Enter now, edits not allowed: _
  Enter later, edits allowed: X
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _

ALL	X
=	_
>	_
>=	_
!=	_
<	_
<=	_

  Other Fields: _

ALL	X
=	_
>	_
>=	_
!=	_
<	_
<=	_

  Value Expr.: _

ALL	X
=	_
>	_
>=	_
!=	_
<	_
<=	_

Operations Allowed:
  Same Field: _

ALL	_
+	_
-	_
*	_
/	_

  Other Fields: _

ALL	_
+	X
-	X
*	_
/	_

  Value Expr.: _

ALL	_
+	X
-	X
*	_
/	_

NOTES:

GENERAL ELEMENTS

Field Name:
Costumes_Rented.Rental_ReturnedDate

Specification Type:
  Unique: _
  Generic: X
  Replica: _
Parent Table: Costumes_Rented
Label: Returned Date
Source Specification: Date
Shared By: _
Aliases: _
Description: The date and time by which the costume is returned.

PHYSICAL ELEMENTS

Data Type: TIMESTAMP
Length: _
Decimal Places: _
Input Mask: Date input box with MM-DD-YYYY
Display Format: _
Character Support:
  Letters (A-Z): _
  Numbers (0-9): X
  Keyboard (.,/$#%): _
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: X
Primary: _
Foreign: _
Alternate: _

Key Structure: Simple: _
Composite: _

Uniqueness: Non-unique: X
Unique: _

Null Support: Nulls OK: X
No nulls: _

Values Entered By: User: X
System: _

Required Value: No: X
Yes: _

Default Value: _

Range of Values: Every day in the year.

Edit Rule:
  Enter now, edits allowed: X
  Enter now, edits not allowed: _
  Enter later, edits allowed: X
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _

ALL	X
=	_
>	_
>=	_
!=	_
<	_
<=	_

  Other Fields: _

ALL	X
=	_
>	_
>=	_
!=	_
<	_
<=	_

  Value Expr.: _

ALL	X
=	_
>	_
>=	_
!=	_
<	_
<=	_

Operations Allowed:
  Same Field: _

ALL	_
+	_
-	_
*	_
/	_

  Other Fields: _

ALL	_
+	X
-	X
*	_
/	_

  Value Expr.: _

ALL	_
+	X
-	X
*	_
/	_

NOTES:

GENERAL ELEMENTS

Field Name: **Sightings.Pokemon_Name**

Specification Type:
  Unique: _
  Generic: _
  Replica: X
Parent Table: Sightings
Label: _
Source Specification: _
Shared By: Sightings, Orders, Pokemon, Pokemon_Inventory
Aliases: _
Description: A foreign key that connects the sighting record to the pokemon species that was sighted.

PHYSICAL ELEMENTS

Data Type: VARCHAR(15)
Length: 15 Characters
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): X
  Numbers (0-9): _
  Keyboard (.,/$#%): _
  Special (©®™Σπ): X

LOGICAL ELEMENTS

Key Type: Non: _
Primary: _
Foreign: X
Alternate: _

Key Structure: Simple: _
Composite: X

Uniqueness: Non-unique: X
Unique: _

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: _
System: X

Required Value: No: _
Yes: X

Default Value: _

Range of Values: _

Edit Rule:
  Enter now, edits allowed: _
  Enter now, edits not allowed: X
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _
ALL _
= X
> _
>= _
!= X
< _
<= _
  Other Fields: _
ALL _
= X
> _
>= _
!= X
< _
<= _

  Value Expr.: _
ALL _
= _
> _
>= _
!= _
< _
<= _

Operations Allowed:
  Same Field: _
ALL _
+ _
- _
* _
/ _
  Other Fields: _
ALL _
+ _
- _
* _
/ _
  Value Expr.: _
ALL _
+ _
- _
* _
/ _

NOTES:

GENERAL ELEMENTS

Field Name: **Sightings.Sighting_Location**

Specification Type:
  Unique: _
  Generic: X
  Replica: _
Parent Table: Sightings
Label: _
Source Specification: Address
Shared By: _
Aliases: _
Description: The last location that the sighted pokemon was spotted at.

PHYSICAL ELEMENTS

Data Type: VARCHAR(40)
Length: 40 Characters
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): X
  Numbers (0-9): X
  Keyboard (.,/$#%): X
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: _
Primary: _
Foreign: _
Alternate: X

Key Structure: Simple: _
Composite: X

Uniqueness: Non-unique: X
Unique: _

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: X
System: _

Required Value: No: _
Yes: X

Default Value: _

Range of Values: _

Edit Rule:
  Enter now, edits allowed: _
  Enter now, edits not allowed: X
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _
ALL _
= X
> _
>= _
!= X
< _
<= _

  Other Fields: _
ALL _
= X
> _
>= _
!= X
< _
<= _

  Value Expr.: _
ALL _
= _
> _
>= _
!= _
< _
<= _

Operations Allowed:
  Same Field: _
ALL _
+ _
- _
* _
/ _

  Other Fields: _
ALL _
+ _
- _
* _
/ _

  Value Expr.: _
ALL _
+ _
- _
* _
/ _

NOTES:

GENERAL ELEMENTS

Field Name: **Sightings.Sighting_Time**

Specification Type:
  Unique: _
  Generic: X
  Replica: _
Parent Table: Sightings
Label: _
Source Specification: Date and time.
Shared By:
Aliases: _
Description: The time that the sighting happened.

PHYSICAL ELEMENTS
Data Type: TIMESTAMP
Length: _
Decimal Places: _
Input Mask: DD/MM/YYYY HH:MM:SS
Display Format: _
Character Support:
  Letters (A-Z): _
  Numbers (0-9): X
  Keyboard (.,/$#%): _
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: _
Primary: _
Foreign: _
Alternate: X

Key Structure: Simple: _
Composite: X

Uniqueness: Non-unique: X
Unique: _

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: X
System: X

Required Value: No: X
Yes: _

Default Value: CURRENT TIMESTAMP

Range of Values: _

Edit Rule:
  Enter now, edits allowed: _
  Enter now, edits not allowed: X
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _
ALL X
= _
> _
>= _
!= _
< _
<= _

  Other Fields: _
ALL _
= _
> _
>= _
!= _
< _
<= _

  Value Expr.: _
ALL _
= _
> _
>= _
!= _
< _
<= _

Operations Allowed:
  Same Field: _
ALL _
+ _
- X
* _
/ _

  Other Fields: _
ALL _
+ _
- _
* _
/ _

  Value Expr.: _
ALL _
+ _
- _
* _
/ _

NOTES:

GENERAL ELEMENTS

Field Name: **Sightings.Sighting_NumPokemon**

Specification Type:
  Unique: _
  Generic: X
  Replica: _
Parent Table: Sightings
Label: _
Source Specification: _
Shared By: _
Aliases: _
Description: The number of pokemon sighted.

PHYSICAL ELEMENTS
Data Type: INT
Length: _
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): _
  Numbers (0-9): X
  Keyboard (.,/$#%): _
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: X
Primary: _
Foreign: _
Alternate: _

Key Structure: Simple: _
Composite: _

Uniqueness: Non-unique: _
Unique: _

Null Support: Nulls OK: _
No nulls: X

Values Entered By: User: X
System: _

Required Value: No: X
Yes: _

Default Value: 0

Range of Values: _

Edit Rule:
  Enter now, edits allowed: _
  Enter now, edits not allowed: X
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:

Same Field: _

ALL	X
=	_
>	_
>=	_
!=	_
<	_
<=	_

Other Fields: _

ALL	_
=	_
>	_
>=	_
!=	_
<	_
<=	_

Value Expr.: _

ALL	_
=	_
>	_
>=	_
!=	_
<	_
<=	_

Operations Allowed:

Same Field: _

ALL	X
+	_
-	_
*	_
/	_

Other Fields: _

ALL	_
+	_
-	_
*	_
/	_

Value Expr.: _

ALL	_
+	_
-	_
*	_
/	_

NOTES:

GENERAL ELEMENTS

Field Name: **Staff.Staff_ID**

Specification Type:
  Unique: _ x
  Generic: _
  Replica: _
Parent Table: Staff
Label: _
Source Specification: _
Shared By:
Aliases: _
Description: _ The unique ID number of every staff person if the database

PHYSICAL ELEMENTS
Data Type: _Numeric
Length: _
Decimal Places: _0
Input Mask: _
Display Format: _
Character Support:
  Letters (A-Z): _
  Numbers (0-9): _ x
  Keyboard (.,/$#%): _
  Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: _
Primary: _x
Foreign: _
Alternate: _

Key Structure: Simple: _x
Composite: _

Uniqueness: Non-unique: _
Unique: _x

Null Support: Nulls OK: _
No nulls: _x

Values Entered By: User: _
System: _x

Required Value: No: _
Yes: _x

Default Value: _

Range of Values: _

Edit Rule:
  Enter now, edits allowed: _
  Enter now, edits not allowed: _ x
  Enter later, edits allowed: _
  Enter later, edits not allowed: _
  Not determined at this time: _

Comparisons Allowed:
  Same Field: _
ALL _
= _x
> _
>= _
!= _x
< _
<= _

  Other Fields: _
ALL _
= _
> _
>= _
!= _
< _
<= _

  Value Expr.: _
ALL _
= _
> _
>= _
!= _
< _
<= _

Operations Allowed:
  Same Field: _
ALL _
+ _
- _
* _
/ _

  Other Fields: _
ALL _
+ _
- _
* _
/ _

  Value Expr.: _
ALL _
+ _
- _
* _
/ _

NOTES:

```
GENERAL ELEMENTS

Field Name:           Staff.Staff_LastName

Specification Type:
  Unique:  _
  Generic: X
  Replica: _
Parent Table:         Staff
Label:                _
Source Specification: Person Name
Shared By:
Aliases:              _
Description:          The last name of a
staff member who works at the facility.


PHYSICAL ELEMENTS
Data Type:            VARCHAR(25)
Length:               25 Characters
Decimal Places:       _
Input Mask:           _
Display Format:       _
Character Support:
  Letters (A-Z):      X
  Numbers (0-9):      _
  Keyboard (.,/$#%):  _
  Special (©®™Σπ):    _


LOGICAL ELEMENTS

Key Type:      Non:        X
               Primary:    _
               Foreign:    _
               Alternate:  _

Key Structure: Simple:     _
               Composite:  _

Uniqueness:    Non-unique: X
               Unique:     _

Null Support:  Nulls OK:   _
               No nulls:   X

Values Entered By: User:   X
                   System: _

Required Value:    No:     _
                   Yes:    X

Default Value:     _

Range of Values:   _

Edit Rule:
  Enter now, edits allowed:       X
  Enter now, edits not allowed:   _
  Enter later, edits allowed:     _
  Enter later, edits not allowed: _
  Not determined at this time:    _

Comparisons Allowed:
  Same Field:  _
               ALL  X
               =    _
               >    _
               >=   _
               !=   _
               <    _
               <=   _
  Other Fields: _
               ALL  _
               =    _
               >    _
               >=   _
               !=   _
               <    _
               <=   _
  Value Expr.: _
               ALL  _
               =    X
               >    _
               >=   _
               !=   X
               <    _
               <=   _

Operations Allowed:
  Same Field:  _
               ALL  _
               +    _
               -    _
               *    _
               /    _
  Other Fields: _
               ALL  _
               +    _
               -    _
               *    _
               /    _
  Value Expr.: _
               ALL  _
               +    _
               -    _
               *    _
               /    _

NOTES:_Numeric
```

GENERAL ELEMENTS

Field Name: **Staff.Staff_FirstName**

Specification Type:
- Unique: _
- Generic: X
- Replica: _

Parent Table: Staff
Label: _
Source Specification: Person Name
Shared By: _
Aliases: _
Description: The first name of a staff member who works to catch the pokemon

PHYSICAL ELEMENTS

Data Type: VARCHAR(25)
Length: 25 Characters
Decimal Places: _
Input Mask: _
Display Format: _
Character Support:
- Letters (A-Z): X
- Numbers (0-9): _
- Keyboard (.,/$#%): _
- Special (©®™Σπ): _

LOGICAL ELEMENTS

Key Type: Non: X; Primary: _; Foreign: _; Alternate: _

Key Structure: Simple: _; Composite: _

Uniqueness: Non-unique: X; Unique: _

Null Support: Nulls OK: _; No nulls: X

Values Entered By: User: X; System: _

Required Value: No: _; Yes: X

Default Value: _

Range of Values: _

Edit Rule:
- Enter now, edits allowed: X
- Enter now, edits not allowed: _
- Enter later, edits allowed: _
- Enter later, edits not allowed: _
- Not determined at this time: _

Comparisons Allowed:

Same Field: _

ALL	X
=	_
>	_
>=	_
!=	_
<	_
<=	_

Other Fields: _

ALL	_
=	_
>	_
>=	_
!=	_
<	_
<=	_

Value Expr.: _

ALL	_
=	X
>	_
>=	_
!=	X
<	_
<=	_

Operations Allowed:

Same Field: _

ALL	_
+	_
-	_
*	_
/	_

Other Fields: _

ALL	_
+	_
-	_
*	_
/	_

Value Expr.: _

ALL	_
+	_
-	_
*	_
/	_

NOTES

A3: BUSINESS RULES

Business Rule #1

RULE INFORMATION

Statement: Deletion of a pokemon species that has been ordered, sighted, or exists in the inventory is forbidden.

Constraint: Deletion of a pokemon species record from the Pokemon table.

Type: Database Oriented: X
Application Oriented _

Category: Field Specific: _
Relationship Specific: X

Test On: Insert: _
Delete: X
Update: _

STRUCTURES AFFECTED

Field Names: _

Table Names: Pokemon

FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: _
Length: _
Decimal Places: _
Character Support: _
Input Mask: _
Display Format: _

Logical Elements: Key Type: _
Key Structure: _
Uniqueness: _
Null Support: _
Values Entered By: _
Default Value: _
Range of Values: _
Comparisons Allowed: X
Operations Allowed: _
Edit Rule: _

ACTION TAKEN

Implement the deletion rule as a restriction between the children of the Pokemon table and the Pokemon table.

NOTES: _

Business Rule #2

RULE INFORMATION

Statement: Staff members should not be allowed to be removed from the database if they have rented costumes.

Constraint: Deletion of records in Costumes_Rented table.

Type: Database Oriented: X
Application Oriented _

Category: Field Specific: _
Relationship Specific: X

Test On: Insert: _
Delete: X
Update: _

STRUCTURES AFFECTED

Field Names: _

Table Names: Staff

FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: _
Length: _
Decimal Places: _
Character Support: _
Input Mask: _
Display Format: _

Logical Elements: Key Type: _
Key Structure: _
Uniqueness: _
Null Support: _
Values Entered By: _
Default Value: _
Range of Values: _
Comparisons Allowed: X
Operations Allowed: _
Edit Rule: _

ACTION TAKEN

Implement the deny deletion rule through restrict and a view on top of that to have all the active staff members.

NOTES: _

Business Rule #3

RULE INFORMATION

Statement: Deletion of costume types that are in the inventory is forbidden.

Constraint: Deletion of a costume type record in the Costume_Types table.

Type: Database Oriented: X
Application Oriented _

Category: Field Specific: _
Relationship Specific: X

Test On: Insert: _
Delete: X
Update: _

STRUCTURES AFFECTED

Field Names: _

Table Names: Costume_Types

FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: _
Length: _
Decimal Places: _
Character Support: _
Input Mask: _
Display Format: _

Logical Elements: Key Type: _
Key Structure: _
Uniqueness: _
Null Support: _
Values Entered By: _
Default Value: _
Range of Values: _
Comparisons Allowed: X
Operations Allowed: _
Edit Rule: _

ACTION TAKEN

Implementing the restrict deletion rule by checking if there are any costumes in the inventory that are using the costume_type that is going to be deleted, if so then we do not delete that costume_type. Otherwise, we can delete the costume_type as that costume_type does not have any records pertaining to it.

NOTES: _

Business Rule #4

RULE INFORMATION

Statement: Costumes can be deemed inactive after being worn out, damaged, or taken out of service.

Constraint: An entry in the Costumes table may be inactivated but not deleted

Type: Database Oriented: X
Application Oriented _

Category: Field Specific: _
Relationship Specific: X

Test On: Insert: _
Delete: X
Update: _

STRUCTURES AFFECTED

Field Names: _

Table Names: _Costumes_Inventory, Costumes_Rented

FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: _
Length: _
Decimal Places: _
Character Support: _
Input Mask: _
Display Format: _

Logical Elements: Key Type: _
Key Structure: _
Uniqueness: _
Null Support: _
Values Entered By: _
Default Value: _
Range of Values: _
Comparisons Allowed: _
Operations Allowed: _
Edit Rule: _

ACTION TAKEN

Implement the deny deletion rule to the costumes_inventory table.

NOTES: _

Business Rule #5

RULE INFORMATION

Statement: Each costume from the inventory can be rented to only one staff member at a time.

Constraint: _

Type: Database Oriented: X
Application Oriented _

Category: Field Specific: _
Relationship Specific: X

Test On: Insert: X
Delete: _
Update: X

STRUCTURES AFFECTED

Field Names: _

Table Names: _Costumes_Rented, Costumes_Inventory

FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: _
Length: _
Decimal Places: _
Character Support: _
Input Mask: _
Display Format: _

Logical Elements: Key Type: _
Key Structure: _
Uniqueness: _
Null Support: _
Values Entered By: _
Default Value: _
Range of Values: _
Comparisons Allowed: _
Operations Allowed: _
Edit Rule: _

ACTION TAKEN

The degree of participation for the costumes_rented table was changed to (0,1)

NOTES: _

Business Rule #6

RULE INFORMATION

Statement: Number of Pokemon sighted has to be greater than 0.

Constraint: _ the field number_of_pokemon in the sightings table must be an int greater than zero

Type: Database Oriented: _ X
Application Oriented _

Category: Field Specific: _ X
Relationship Specific: _

Test On: Insert: _ X
Delete: _
Update: _ X

STRUCTURES AFFECTED

Field Names: _ number_of_pokemon

Table Names: _

FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: _ X
Length: _
Decimal Places: _
Character Support: _
Input Mask: _
Display Format: _

Logical Elements: Key Type: _
Key Structure: _
Uniqueness: _
Null Support: _
Values Entered By: _
Default Value: _
Range of Values: _ X
Comparisons Allowed: _
Operations Allowed: _
Edit Rule: _

ACTION TAKEN

Limit the possible values for number_of_pokemon to be integers greater than zero.

_

NOTES: _

Business Rule #7

RULE INFORMATION

Statement: Order sale price has to be greater than zero
Constraint: Cannot enter a sale price less than or equal to zero
Type: Database Oriented: X
Application Oriented _

Category: Field Specific: _
Relationship Specific: X

Test On: Insert: X
Delete: _
Update: _

STRUCTURES AFFECTED

Field Names: _OrderID, sale_price

Table Names: _Order

FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: X
Length: _
Decimal Places: _
Character Support: _
Input Mask: _
Display Format: _

Logical Elements: Key Type: _
Key Structure: _
Uniqueness: _
Null Support: _
Values Entered By: _
Default Value: _
Range of Values: _
Comparisons Allowed: _
Operations Allowed: _
Edit Rule: _

ACTION TAKEN

If a negative sale price is entered the transaction will cause an error

NOTES: _

Business Rule #8

RULE INFORMATION

Statement: _The costume checkout date comes before the costume due date

Constraint: _Cannot enter custom due date that comes before custom checkout date

Type: Database Oriented: X
Application Oriented _

Category: Field Specific: _
Relationship Specific: X

Test On: Insert: X
Delete: _
Update: _

STRUCTURES AFFECTED

Field Names: _Costume_rentedID, costume_rental_date, costume_due_date

Table Names: _Costume_rented

FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: _
Length: _
Decimal Places: _
Character Support: _
Input Mask: _
Display Format: _

Logical Elements: Key Type: _
Key Structure: _
Uniqueness: _
Null Support: _
Values Entered By: _
Default Value: _
Range of Values: X
Comparisons Allowed: _
Operations Allowed: _
Edit Rule: _

ACTION TAKEN

If a costume due date entered takes place before the rental_date then cause am error

NOTES: __

Business Rule #9

RULE INFORMATION

Statement: _The Costume's returned date comes after the costume’s checkout date
Constraint: _return date has to come after checkout date
Type: Database Oriented: X
Application Oriented _

Category: Field Specific: _
Relationship Specific: X

Test On: Insert: X
Delete: _
Update: _

STRUCTURES AFFECTED

Field Names: _Costume_rentedID, costume_rental_date, costume_due_date

Table Names: _Costume_rented

FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: _
Length: _
Decimal Places: _
Character Support: _
Input Mask: _
Display Format: _

Logical Elements: Key Type: _
Key Structure: _
Uniqueness: _
Null Support: _
Values Entered By: _
Default Value: _
Range of Values: X
Comparisons Allowed: _
Operations Allowed: _
Edit Rule: _

ACTION TAKEN

_ If a costume return date comes before costume checkout date, cause an error

NOTES: __

Business Rule #10

RULE INFORMATION

Statement: Sighting_Time must be before CURRENT_TIMESTAMP.

Constraint: The sighting_time being less than or equal to CURRENT_TIMESTAMP

Type:	Database Oriented:	X
	Application Oriented	_
Category:	Field Specific:	X
	Relationship Specific:	_
Test On:	Insert:	X
	Delete:	_
	Update:	_

STRUCTURES AFFECTED

Field Names: Sighting_Time

Table Names: Sightings

FIELD ELEMENTS AFFECTED

Physical Elements:	Data Type:	_
	Length:	_
	Decimal Places:	_
	Character Support:	_
	Input Mask:	_
	Display Format:	_
Logical Elements:	Key Type:	_
	Key Structure:	_
	Uniqueness:	_
	Null Support:	_
	Values Entered By:	_
	Default Value:	CURRENT_TIMESTAMP
	Range of Values:	_
	Comparisons Allowed:	X (Compare CURRENT_TIMESTAMP with the input)
	Operations Allowed:	_
	Edit Rule:	_

ACTION TAKEN

On insert, CHECK if the input is less than CURRENT_TIMESTAMP.

NOTES: _

Business Rule #11

RULE INFORMATION

Statement: A staff member can only rent five costumes at a time.

Constraint: The degree of participation from staff to costumes_rented is only limited to five, so there can only be five active rentals per staff member.

Type: Database Oriented: _
Application Oriented X

Category: Field Specific: _
Relationship Specific: X

Test On: Insert: X
Delete: _
Update: _

STRUCTURES AFFECTED

Field Names: _

Table Names: Costumes_Rented

FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: _
Length: _
Decimal Places: _
Character Support: _
Input Mask: _
Display Format: _

Logical Elements: Key Type: _
Key Structure: _
Uniqueness: _
Null Support: _
Values Entered By: _
Default Value: _
Range of Values: _
Comparisons Allowed: X (Want to see how many active records in the costumes_rented table are associated with a particular staff member.)
Operations Allowed: _
Edit Rule: _

ACTION TAKEN

On insert, check if the staff member who is having a record inserted already has five active records associated with them.

NOTES: _

Business Rule #12

RULE INFORMATION

Statement: Once a customer has placed an order, the order cannot be deleted.

Constraint: Deletion of order records inside Orders.

Type: Database Oriented: X
Application Oriented _

Category: Field Specific: _
Relationship Specific: X

Test On: Insert: _
Delete: X
Update: _

STRUCTURES AFFECTED

Field Names: _

Table Names: Orders

FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: _
Length:
Decimal Places: _
Character Support: _
Input Mask: _
Display Format: _

Logical Elements: Key Type: _
Key Structure: _
Uniqueness: _
Null Support: _
Values Entered By: _
Default Value: _
Range of Values: _
Comparisons Allowed: _
Operations Allowed: _
Edit Rule: _

ACTION TAKEN

Use the Restrict delete rule and implement it with deny. Essentially on delete, check if the order exists in fulfilled_orders, and if it does, do not delete the order record from the Orders table.

NOTES: _

Business Rule #13

RULE INFORMATION

Statement: Once a pokemon has been bought, the pokemon cannot be deleted from the Pokemon_Inventory.

Constraint: Deletion of pokemon inside Pokemon_Inventory.

Type: Database Oriented: X
Application Oriented _

Category: Field Specific: _
Relationship Specific: X

Test On: Insert: _
Delete: X
Update: _

STRUCTURES AFFECTED

Field Names: _

Table Names: Pokemon_Inventory

FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: _
Length: _
Decimal Places: _
Character Support: _
Input Mask: _
Display Format: _

Logical Elements: Key Type: _
Key Structure: _
Uniqueness: _
Null Support: _
Values Entered By: _
Default Value: _
Range of Values: _
Comparisons Allowed: _
Operations Allowed: _
Edit Rule: _

ACTION TAKEN

Use the Restrict delete rule and implement it with deny. Essentially on delete, check if the Pokemon_ID exists inside Fulfilled_Orders, and if it does, do not delete the record from the Pokemon_Inventory.

NOTES: _

Business Rule #14

RULE INFORMATION

Statement: Pokemon_Price is greater than or equal to 0.
Constraint: Cannot enter a negative price for a Pokemon because that would not make sense.
Type: Database Oriented: X
Application Oriented _

Category: Field Specific: X
Relationship Specific: _

Test On: Insert: X
Delete: _
Update: X

STRUCTURES AFFECTED

Field Names: Pokemon_Price

Table Names: _

FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: _
Length: _
Decimal Places: _
Character Support: _
Input Mask: _
Display Format: _

Logical Elements: Key Type: _
Key Structure: _
Uniqueness: _
Null Support: _
Values Entered By: _
Default Value: _
Range of Values: X
Comparisons Allowed: _
Operations Allowed: _
Edit Rule: _

ACTION TAKEN

If a negative pokemon price is entered the transaction will alert the user to make sure that the value is positive. Implementing this is a CHECK constraint.

NOTES: _