Pokemon Procurement Center Database Design

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October 27th, 2021

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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.
 - o Fields:
 - \blacksquare 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

- o 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:
 - \blacksquare Costume ID (PK)
 - <u>Costume Type</u> (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:
 - lacktriangle 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
 - <u>Sighting NumPokemon</u>
- 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.
 - o Fields:
 - \blacksquare <u>Pokemon name</u> (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:
 - <u>Costume Type</u> (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:
 - \blacksquare Costume ID(PK)
 - \blacksquare 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. <u>Deletion of pokemon species that has been ordered, sighted, or exists in the inventory is</u> 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

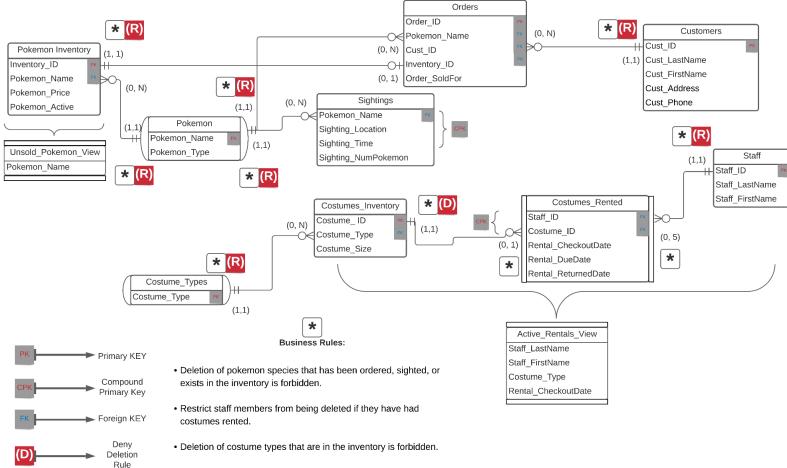
<u>A1</u>	ER Diagram
<u>A2</u>	Field Specification Forms
Δ3	Business Rule Specification Form

Appendix

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

Appendix A1



- 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.

Restrict Deletion Rule

Check Business

Rules

- 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
                                                   Not determined at this time:
Field Name:
                     Pokemon.Pokemon Name
                                                 Comparisons Allowed:
                                                    Same Field:
Specification Type:
                                                                 ALL
 Unique: X
                                                                 =
 Generic: _
 Replica: _
Parent Table:
                     Pokemon
Label:
Source Specification:
Shared By:
                     Orders, Sightings,
Pokemon Inventory
                                                   Other Fields:
                                                                 ALL
Aliases:
Description:
                     The name of a species
                                                                 =
of Pokemon
                                                                 >=
                                                                      Х
                                                                  ! =
PHYSICAL ELEMENTS
                     VARCHAR (15)
Data Type:
Length:
                     15
                                                   Value Expr.:
Decimal Places:
                                                                 ALL
Input Mask:
                                                                 =
Display Format:
Character Support:
 Letters (A-Z):
 Numbers (0-9):
 Keyboard (.,/$#%):
 Special (©®™Σπ):
                                                 Operations Allowed:
                                                   Same Field:
LOGICAL ELEMENTS
                                                                 ALL
Key Type:
              Non:
              Primary:
              Foreign:
              Alternate: _
                                                   Other Fields:
Key Structure: Simple:
                                                                 ALL
              Composite: _
Uniqueness:
              Non-unique:
              Unique:
Null Support: Nulls OK:
                                                   Value Expr.:
              No nulls:
Values Entered By: User: X
                  System: _
Required Value:
                  No:
                  Yes:
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:
```

GENERAL ELEMENTS		Enter now, edits allowed: Enter now, edits not allo	_
Field Name:	Pokemon.Pokemon_Type	Enter later, edits allowe Enter later, edits not al	_
Specification Type:	:	Not determined at this ti	me: _
Unique: _			
Generic: X		Comparisons Allowed:	
Replica: _		Same Field:	
Parent Table:	Pokemon	ALL _ = X	
Label:	Type	= X	
Source Specification Shared By:	on: _	/ _ >=	
Aliases:	_	!= X	
	- The Pokemon type	· · · · · · · · · · · · · · · · · · ·	
refers to the diffe			
properties associat		-	
		Other Fields: _	
		ALL _	
PHYSICAL ELEMENTS		= _	
		> _	
Data Type:	VARCHAR (10)	>= _	
Length:	10 Characters	>= _ != _ < _	
Decimal Places:	_	< _ <=	
Input Mask: Display Format:	_	<= _	
Character Support:	_	Value Expr.:	
Letters (A-Z):	X	ALL	
Numbers (0-9):		=	
Keyboard (.,/\$#%)	_):	> -	
Special (©®™Σπ):	_	>=	
		!=	
		< _	
LOGICAL ELEMENTS		<= _	
Key Type: Non:	: X	Operations Allowed:	
Prin	mary: _	Same Field: _	
Fore	eign: _	ALL _	
Alte	ernate: _	+ _	
	_	- * -	
Key Structure: Simp	ple: posite:	* -	
Com <u>r</u>	posite: _	/ _	
Uniqueness: Non-	-unique: X	Other Fields: _	
	que:	ALL _	
		+ _	
= =	ls OK:	- -	
No r	nulls: X	* _	
Welmer Betamed Dec	Hanna V	/ _	
Values Entered By:		Value Expr.:	
	System: _	ALL	
Required Value:	No:	+ +	
noquirou varao.	Yes: X	<u> </u>	
		*	
Default Value:	_	/ _	
	(Normal, Fire, Water, nting, Poison, Electric, nic, Ice, Bug, Ghost, k, Fairy)	NOTES:	
Edit Rule:			

```
Field Name:
                  Customers.Cust_ID
                                                             ALL
                                                                  Χ
Specification Type:
 Unique: X
 Generic: _
                                                              ! =
 Replica: _
Parent Table:
                  Customers
Label:
Source Specification: _
                                                Other Fields: _
Shared By:
                   Orders
Aliases:
Description: The unique
                                                              >
identifying number given to each customer
                                                              >=
                                                              ! =
                                                              <
PHYSICAL ELEMENTS
                                                              <=
Data Type:
                  INT
                                                 Value Expr.:
Length:
                                                             ALL
Decimal Places:
Input Mask:
                                                              >
Display Format:
                                                              >=
Character Support:
                                                              ! =
 Letters (A-Z):
                                                              <
 Numbers (0-9):
 Keyboard (.,/$#%): _
 Special (©®™Σπ):
                                               Operations Allowed:
                                                 Same Field:
                                                             ALL
LOGICAL ELEMENTS
Key Type:
             Non:
             Primary:
             Foreign:
             Alternate: _
                                                 Other Fields:
                                                              ALL
Key Structure: Simple: X
             Composite: _
             Non-unique: _
Uniqueness:
             Unique: X
                                                 Value Expr.:
Null Support: Nulls OK:
                                                             ALL
             No nulls: X
Values Entered By: User:
                 System: X
Required Value:
               No:
                                               NOTES:
                 Yes:
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 Comparisons Allowed: Field Name: Same Field: Customers.Cust_LastName ALL X = Specification Type: Unique: Generic: X Replica: _ Parent Table: Customers Label: Name Source Specification: Person Name Other Fields: Shared By: ALL Aliases: = Description: The last name of the customer. >= PHYSICAL ELEMENTS Data Type: VARCHAR (25) Value Expr.: Length: 25 Characters ALL Decimal Places: = Input Mask: Display Format: >= Character Support: ! = Letters (A-Z): Numbers (0-9): Keyboard (.,/\$#%): _ Special (©®™Σπ): Operations Allowed: Same Field: ALL LOGICAL ELEMENTS + Key Type: Non: X Primary: Foreign: Other Fields: _ Alternate: _ A T.T. Key Structure: Simple: Composite: _ Non-unique: X Uniqueness: Unique: Value Expr.: Null Support: Nulls OK: ALL No nulls: X Values Entered By: User: X System: _ Required Value: NOTES: No: Yes: Default Value: Range of Values: Edit Rule: Enter now, edits allowed: Enter now, edits not allowed: Enter later, edits allowed: Enter later, edits not allowed: _

GENERAL ELEMENTS Comparisons Allowed: Field Name: Same Field: Customers.Cust_FirstName ALL X -Specification Type: Unique: Generic: X Replica: _ Parent Table: Customers Label: Source Specification: Person Name Other Fields: Shared By: ALL Aliases: = Description: The first name of the customer. >= PHYSICAL ELEMENTS Data Type: VARCHAR (25) Value Expr.: Length: 25 Characters ALL Decimal Places: = Input Mask: Display Format: >= Character Support: ! = Letters (A-Z): Numbers (0-9): Keyboard (.,/\$#%): _ Special (©®™Σπ): Operations Allowed: Same Field: ALL LOGICAL ELEMENTS + Key Type: Non: X Primary: Foreign: Other Fields: _ Alternate: _ A T.T. Key Structure: Simple: Composite: _ Non-unique: X Uniqueness: Unique: Value Expr.: Null Support: Nulls OK: ALL No nulls: X Values Entered By: User: X System: _ Required Value: NOTES: No: Yes: Default Value: Range of Values: Edit Rule: Enter now, edits allowed: Enter now, edits not allowed: Enter later, edits allowed: Enter later, edits not allowed: _

GENERAL ELEMENTS	S		Comparisons All	owed:	
Field Name:		Customers.Cust_Address		ALL =	_ X
Specification Ty	ype:			>	_
Unique: _				>=	_
Generic: X				! =	Χ
Replica: _		0		<	_
Parent Table: Label:		Customers Address		<=	_
Source Specifica			Other Fields:		
Shared By:		11441 000	001101 110140.	- ALL	
Aliases:		_		=	_
Description:		The home street		>	_
address of the o	custome	er		>=	_
				! =	_
PHYSICAL ELEMENT	me			< <=	_
FRISICAL ELEMENI	13			\ <u> </u>	_
Data Type:		VARCHAR (50)	Value Expr.:		
Length:		50 Characters	-	ALL	_
Decimal Places:		_		=	_
Input Mask:		_		>	_
Display Format:		_		>=	_
Character Support Letters (A-Z):		X		! = <	_
Numbers $(0-9)$:		X X		<=	_
Keyboard (.,/\$		X			_
Special (©®™Σr	п):	_	Operations Allo	wed:	
			Same Field:	_	
	~			ALL	_
LOGICAL ELEMENTS	S			+	_
Key Type: N	Non:	X		*	_
	Primary			/	_
	Foreign	_			_
I	Alterna	ate: _	Other Fields:	_	
	- 1			ALL	_
Key Structure: S	Simpie: Composi	-		+	_
	COMPOSI	_		*	_
Uniqueness: N	Non-uni	ique: X		/	_
Ţ	Unique:	: _			_
			Value Expr.:	_	
= =	Nulls O	_		ALL	_
Γ	No null	ls: X		+	_
Values Entered E	Bv: Use	er: X		*	_
	-	stem:		/	_
Required Value:	No:	=	NOTES:		
	Yes	s: X			
Default Value:	_				
Range of Values:	:				
_	=				
Edit Rule:	ite oll	Lowed: X			
Enter now, edi Enter now, edi					
Enter how, ear		-			
Enter later, e		_			
Not determined	d at th	nis time:			

GENERAL ELEMENTS				Co	omparisons Al	lowed:	
Field Name:		Custo	omers.Cust_Phone		Same Field:	- ALL	_
Specification '	Tyne:					= >	-
Unique: X	Type.					>=	_
Generic: _						!=	_
Replica:						· <	_
Parent Table:		Custo	nmers			<=	_
Label:		Phone				`	_
Source Specific	cation.				Other Fields		
Shared By:	cacion.	1110110	o Number		Other ricial	ALL	
Aliases:		_				=	_
Description:		— The r	main phone number			>	_
of the custome	r	1110 1	main phone number			>=	_
or the custome.	_					!=	_
						· <	_
PHYSICAL ELEME	NTS					<=	_
THISTOME BEENE	IVID						_
Data Type:		VARCE	HAR (20)		Value Expr.:		
Length:			haracters		varue Expr	— ALL	
Decimal Places		20 01	naracters			=	_
Input Mask:	•	- +1 (±	###) ###-###			>	_
Display Format		' - (1	,			>=	_
Character Supp		_				!=	_
Letters (A-Z						· <	_
Numbers (0-9	•	_ X				<=	_
Keyboard (.,		X				`	_
Special (©®™		21		Or	erations All	owed.	
phecial (00	<u> </u>	_		10	Same Field:	.owca.	
					Jame Freid.	— ALL	
LOGICAL ELEMEN	тs					+	_
HOGICAL ELEMEN	10					_	_
Key Type:	Non:		X			*	_
ncy Type.	Primar	77.	21			/	_
	Foreig		_			,	_
	Altern		_		Other Fields		
	1110011		_		001101 110100	ALL	
Key Structure:	Simple	•				+	_
	Compos		_			_	_
	00	100.	_			*	_
Uniqueness:	Non-un	ique:	X			/	_
	Unique	_				,	_
			=		Value Expr.:		
Null Support:	Nulls	OK:	X			— ALL	
	No nul					+	_
			_			_	_
Values Entered	Bv: Us	er:	X			*	_
	_	stem:				/	_
	-		_				_
Required Value	: No	:	X	NC	TES:		
-		s:					
			_				
Default Value:							
	_						
Range of Value	s:						
-	_						
Edit Rule:							
Enter now, e	dits al	lowed:	:				
Enter now, e			_				
Enter later,			-				
Enter later,							
Not determin			_				
			_				

```
GENERAL ELEMENTS
                                                  Not determined at this time:
Field Name:
                                                Comparisons Allowed:
Pokemon_Inventory.Inventory_ID
                                                  Same Field:
                                                                ALL
Specification Type:
                                                                -
 Unique: X
 Generic: _
 Replica: _
Parent Table:
                   Pokemon Inventory
Label:
Source Specification: _
Shared By:
                                                  Other Fields:
Aliases:
                                                                ALL
Description: The unique key that
                                                                =
corresponds to each pokemon in inventory at
the PPC.
PHYSICAL ELEMENTS
Data Type:
                    INT
                                                  Value Expr.:
Length:
                                                                ALL
Decimal Places:
Input Mask:
Display Format:
Character Support:
 Letters (A-Z):
 Numbers (0-9):
 Keyboard (.,/$#%): _
 Special (©®™Σπ):
                                                Operations Allowed:
                                                  Same Field:
                                                                ALL
LOGICAL ELEMENTS
Key Type:
              Non:
              Primary:
              Foreign:
                                                  Other Fields: _
              Alternate: _
                                                                AT.T.
Key Structure: Simple:
              Composite: _
Uniqueness:
              Non-unique:
              Unique:
                                                   Value Expr.:
Null Support: Nulls OK:
                                                                ALL
              No nulls:
Values Entered By: User:
                  System: X
Required Value:
                                                NOTES:
                No:
                 Yes:
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:
```

```
GENERAL ELEMENTS
                                                    Not determined at this time:
Field Name:
                                                  Comparisons Allowed:
Pokemon_Inventory.Pokemon_Name
                                                    Same Field:
                                                                  ALL
Specification Type:
                                                                  -
 Unique:
 Unique: _
Generic: _
 Replica: X
Parent Table:
                     Pokemon Inventory
Label:
                     Species
Source Specification: Species
Shared By: Pokemon Validation,
                                                    Other Fields:
Pokemon Inventory, Orders, Sightings
                                                                  ALL
Aliases:
                                                                  =
                    The name of the
Description:
pokemon species that is in the inventory.
                                                                  >=
                                                                       Х
PHYSICAL ELEMENTS
Data Type:
                     VARCHAR (15)
                                                    Value Expr.:
Length:
                                                                  ALL
                     15
Decimal Places:
Input Mask:
Display Format:
Character Support:
 Letters (A-Z):
 Numbers (0-9):
 Keyboard (.,/$#%):
 Special (\mathbb{C}\mathbb{R}^{\mathbb{T}M}\Sigma\pi): X
                                                  Operations Allowed:
                                                    Same Field:
                                                                  ALL
LOGICAL ELEMENTS
Key Type:
              Non:
              Primary:
              Foreign:
                                                    Other Fields: _
              Alternate: _
                                                                  AT.T.
Key Structure: Simple: X
              Composite: _
Uniqueness:
              Non-unique: X
              Unique:
                                                    Value Expr.:
Null Support: Nulls OK:
                                                                  ALL
              No nulls:
Values Entered By: User:
                  System: X
Required Value:
                                                  NOTES:
                No:
                  Yes:
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:
```

```
GENERAL ELEMENTS
                                                   Not determined at this time:
Field Name:
                                                Comparisons Allowed:
Pokemon_Inventory.Pokemon_Price
                                                   Same Field:
                                                                ALL X
Specification Type:
 Unique:
 Generic: X
 Replica: _
Parent Table:
                    Pokemon Inventory
                                                                ! =
Label:
                     Price
Source Specification: Price
                                                                <=
Shared By:
                                                  Other Fields: Order SoldFor in Orders
Aliases:
Description: The price that the
                                                 table.
pokemon in the inventory is set to be sold
                                                                ALL X
                                                                >=
PHYSICAL ELEMENTS
                                                                1 =
Data Type:
                   FLOAT
Length:
Decimal Places:
                                                   Value Expr.:
                                                                ALL
Input Mask:
Display Format:
Character Support:
 Letters (A-Z):
 Numbers (0-9):
 Keyboard (.,/$#%): X
 Special (©®™Σπ):
                                                 Operations Allowed:
LOGICAL ELEMENTS
                                                   Same Field:
                                                                ALL X
              Non:
Key Type:
                         Х
                                                                +
              Primary:
              Foreign:
              Alternate: _
Key Structure: Simple:
                                                   Other Fields: Order SoldFor in Orders
              Composite: _
                                                 table.
                                                                ALL X
Uniqueness:
              Non-unique: X
              Unique:
Null Support: Nulls OK:
              No nulls: X
                                                   Value Expr.:
Values Entered By: User: X
                                                                ALL
                  System: X
Required Value:
                 No:
                  Yes:
Default Value:
                                                 NOTES:
Range of Values:
Edit Rule:
 Enter now, edits allowed:
 Enter now, edits not allowed: X
 Enter later, edits allowed:
```

Enter later, edits not allowed:

GENERAL ELEMEN	TS		parisons Allo	owed:	
Field Name:	Orde	ers.Order_ID	ame rieia;	ALL	_ X
Specification Unique: X Generic: _ Replica: _ Parent Table: Label:	Type: Orde ID	ers		> > > = ! = < < = < = <	X
Source Specifi Shared By:		Ot	ther Fields:	_ ALL	
Aliases:	-			=	_
		primary key that ne orders table.		> >= != <	_ _ _ _
PHYSICAL ELEME	NTS			<=	_
Data Type: Length: Decimal Places Input Mask:	INT	Vā	alue Expr.:	_ ALL = >	_ _
Display Format Character Supp Letters (A-Z Numbers (0-9	ort:): _			>= != < <=	_ _ _
Keyboard (., Special (©®™	_		rations Allowame Field:	wed: _ ALL	_
LOGICAL ELEMEN	TS			+	_
Key Type:	Non: Primary: Foreign:	X		* /	_ _ _
	Alternate:	_ _	ther Fields:	- ALL	
Key Structure:	Simple: Composite:	X -		+ - *	_ _ _
Uniqueness:	Non-unique: Unique:	X		/	_
Null Support:			alue Expr.:	_ ALL	_
	No nulls:	X		+	_
Values Entered	By: User: System:	\overline{x}		* /	_ _
Required Value	No: Yes:	_ NOTE	ES:		
Default Value:	_				
Range of Value	s: _				
Edit Rule: Enter now, e Enter now, e Enter later, Enter later, Not determin	dits not all edits allow edits not a	owed: X ged: _ lllowed: _			

GENERAL ELEMENTS Comparisons Allowed: Field Name: Orders.Pokemon_Name Same Field: ALL Χ Specification Type: = Unique: _ Generic: _ Replica: X Parent Table: Orders Label: Species Source Specification: Species Other Fields: Shared By: Pokemon, Pokemon Inventory, Orders, Sightings ALL Aliases: = The name of the Description: pokemon species that is being ordered. >= X 1 = PHYSICAL ELEMENTS Data Type: VARCHAR (15) Value Expr.: Length: 1.5 ALL Decimal Places: Input Mask: Display Format: Character Support: ! = Letters (A-Z): Numbers (0-9): Keyboard (.,/\$#%): _ Special (©®™Σπ): Operations Allowed: Same Field: ALL LOGICAL ELEMENTS + Key Type: Non: Primary: Foreign: Other Fields: _ Alternate: _ A T.T. Key Structure: Simple: X Composite: _ Uniqueness: Non-unique: X Unique: Value Expr.: Null Support: Nulls OK: No nulls: Values Entered By: User: System: X Required Value: NOTES: No: Yes: 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: _

GENERAL ELEMENTS Comparisons Allowed: Field Name: Orders.Customer_ID Same Field: ALL Χ Specification Type: -Unique: _ Generic: _ >= X Replica: X ! = Parent Table: Orders Label: Source Specification: Other Fields: Shared By: Customers Aliases: ALL Description: The customer id that = identifies which customer the order is by. >= X 1 = PHYSICAL ELEMENTS Data Type: TNT Length: Value Expr.: Decimal Places: ALL Input Mask: = Display Format: Character Support: Letters (A-Z): ! = Numbers (0-9): Keyboard (.,/\$#%): _ Special (©®™Σπ): Operations Allowed: Same Field: LOGICAL ELEMENTS ALL + Key Type: Non: Primary: Foreign: Alternate: _ Other Fields: _ Key Structure: Simple: A T.T. Composite: _ Uniqueness: Non-unique: X Unique: Null Support: Nulls OK: Value Expr.: No nulls: ALL Values Entered By: User: System: X Required Value: No: NOTES: Yes: 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:

```
FIELD SPECIFICATIONS
                                                 Enter later, edits allowed:
                                                 Enter later, edits not allowed: _
                                                 Not determined at this time:
GENERAL ELEMENTS
Field Name:
                  Orders.Inventory_ID
                                               Comparisons Allowed:
                                                 Same Field:
Specification Type:
                                                              ALL
 Unique: _
                                                                   X
                                                              =
 Generic: _
 Replica: X
                                                              >=
Parent Table:
                   Orders
                                                              ! =
Label:
                                                              <
Source Specification:
                                                              <=
                    Pokemon Inventory
Shared By:
Aliases:
                                                 Other Fields:
Description: If an order is
                                                              ALL
filled, this column will be filled with the
inventory ID number associated with the
                                                              >
pokemon given on the order.
                                                              >=
                                                              1 =
PHYSICAL ELEMENTS
Data Type:
                                                 Value Expr.:
                                                              ALL
Length:
Decimal Places:
Input Mask:
Display Format:
Character Support:
 Letters (A-Z):
 Numbers (0-9):
 Keyboard (.,/$#%):
                                               Operations Allowed:
 Special (©®™Σπ):
                                                 Same Field:
                                                              ALL
LOGICAL ELEMENTS
Key Type:
             Non:
             Primary:
             Foreign:
             Alternate: _
                                                 Other Fields:
                                                              ALL
Key Structure: Simple: X
             Composite: _
Uniqueness:
             Non-unique:
             Unique: X
                                                 Value Expr.:
Null Support: Nulls OK: X
                                                              ALL
             No nulls: _
Values Entered By: User:
                 System: X
Required Value:
                                               NOTES:
               No:
                 Yes:
Default Value:
Range of Values:
Edit Rule:
 Enter now, edits allowed:
 Enter now, edits not allowed: __
```

GENERAL ELEMENTS		Comparisons Allowed: Same Field: _
Field Name:	Orders.Order_SoldFor	ALL X
Specification Type: Unique:		> _ > _ >=
Generic: X		!=
Replica:		· <u>-</u>
Parent Table:	Orders	
Label:	Price	_
Source Specification	n: Price	Other Fields: Pokemon_Price in
Shared By:	_	Pokemon_Inventory
Aliases:	_	ALL X
	The price that the	= _
customer paid for t	ne pokemon they wanted.	> _
		>= _
		!= _
PHYSICAL ELEMENTS		< _
Dalla III.		<= _
Data Type:	FLOAT	Value Error
Length: Decimal Places:	- 2	Value Expr.: _ ALL
Input Mask:	2	=
Display Format:	_	- - >
Character Support:	_	>=
Letters (A-Z):		=
Numbers (0-9):	_ X	!= <
Keyboard (.,/\$#%)	X	<=
Special (©®™Σπ):		_
	_	Operations Allowed:
		Same Field: _
LOGICAL ELEMENTS		ALL X
		+ _
= ==	X	
Prim	_	* –
	_gn:	/ _
Alte	rnate: _	Olbert Elisable - Bellever Belleville
Key Structure: Simp		Other Fields: Pokemon_Price in
	osite:	Pokemon_Inventory ALL X
comp	_	+
Uniqueness: Non-	nnique: X	
Uniq		*
_	_	_
Null Support: Null	S OK: X	
No n	ılls: _	Value Expr.: _
		ALL _
Values Entered By:		+ _
:	System: _	-
Deand wed Welling	I V	_
-	No: X Yes:	/ _
	_	NOTES:
Default Value:	IULL	NOTED.
Dolaulo Valuo.	.022	
Range of Values:	-	
Edit Rule:		
Enter now, edits	allowed:	
Enter now, edits :		
Enter later, edit	-	
Enter later, edit	s not allowed: X	
Not determined at	this time: _	

GENERAL ELEMENTS Comparisons Allowed: Field Name: Same Field: Costumes_Inventory.Costume_ID ALL Χ -Specification Type: Unique: X >= Generic: _ X ! = Replica: _ Parent Table: Costumes Inventory Label: Source Specification: Other Fields: Shared By: Costumes Rented ALL Aliases: = Description: The unique id of the costume that is in the inventory. >= X 1 = PHYSICAL ELEMENTS Data Type: TNT Value Expr.: Length: ALL Decimal Places: = Input Mask: Display Format: Character Support: ! = Letters (A-Z): Numbers (0-9): Keyboard (.,/\$#%): _ Special (©®™Σπ): Operations Allowed: Same Field: ALL LOGICAL ELEMENTS + Key Type: Non: Primary: Foreign: Other Fields: _ Alternate: _ A T.T. Key Structure: Simple: X Composite: _ Uniqueness: Non-unique: Unique: Value Expr.: Null Support: Nulls OK: ALL No nulls: Values Entered By: User: System: X Required Value: NOTES: No: Yes: 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: _

```
GENERAL ELEMENTS
                                                   Not determined at this time:
Field Name:
                                                 Comparisons Allowed:
Costumes_Inventory.Costume_Type
                                                   Same Field:
                                                                 ALL
Specification Type:
                                                                 -
 Unique:
 Unique: _
Generic: _
 Replica: X
Parent Table:
                    Costumes Inventory
                    Type of Costume
Source Specification: Costume Type
Shared By: Costumes Types
                                                   Other Fields:
Aliases:
                                                                 ALL
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)
                                                   Value Expr.:
Length:
                     30
                                                                 ALL
Decimal Places:
Input Mask:
Display Format:
Character Support:
 Letters (A-Z):
 Numbers (0-9):
 Keyboard (.,/$#%): X
 Special (©®™Σπ):
                                                 Operations Allowed:
                                                   Same Field:
                                                                 ALL
LOGICAL ELEMENTS
Key Type:
              Non:
              Primary:
              Foreign:
                                                   Other Fields: _
              Alternate: _
                                                                 AT.T.
Key Structure: Simple: X
              Composite: _
Uniqueness:
              Non-unique: X
              Unique:
                                                   Value Expr.:
Null Support: Nulls OK:
                                                                 ALL
              No nulls:
Values Entered By: User:
                  System: X
Required Value:
                                                 NOTES:
                 No:
                  Yes:
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:
```

GENERAL ELEMENTS Comparisons Allowed: Field Name: Same Field: Costumes_Inventory.Costume_Size ALL X = Specification Type: Unique: Generic: X Replica: _ Parent Table: Costumes_Inventory Label: Size Other Fields: Source Specification: Costume Size Shared By: ALL Aliases: = Description: The size of the costume in the inventory. >= PHYSICAL ELEMENTS Data Type: VARCHAR (5) Value Expr.: Length: ALL Decimal Places: = Input Mask: Display Format: >= Character Support: ! = Letters (A-Z): Numbers (0-9): Keyboard (.,/\$#%): _ Special (©®™Σπ): Operations Allowed: Same Field: ALL LOGICAL ELEMENTS + Χ Χ Key Type: Non: X Primary: Foreign: Other Fields: _ Alternate: _ A T.T. Key Structure: Simple: Composite: _ Non-unique: X Uniqueness: Unique: Value Expr.: Null Support: Nulls OK: ALL No nulls: X Values Entered By: User: X System: _ Required Value: NOTES: No: Yes: Default Value: Range of Values: Edit Rule: Enter now, edits allowed: Enter now, edits not allowed: Enter later, edits allowed: Enter later, edits not allowed: _

```
GENERAL ELEMENTS
                                                  Not determined at this time:
Field Name:
                                                Comparisons Allowed:
Costume_Types.Costume_Type
                                                  Same Field:
                                                               ALL
Specification Type:
 Unique: X
 Generic: _
 Replica: _
Parent Table:
                    Costume Types
Label:
                    Type of Costume
Source Specification: Costume Type
Shared By: Costumes Inventory
                                                 Other Fields:
Aliases:
                                                               ALL
Description:
                   A primary key that is
                                                               =
a string to help identify all the various
costume types, such as a Gyarados costume.
                                                               >=
                                                                    Х
PHYSICAL ELEMENTS
Data Type:
                    VARCHAR (30)
                                                  Value Expr.:
Length:
                    30
                                                               ALL
Decimal Places:
Input Mask:
Display Format:
Character Support:
 Letters (A-Z):
 Numbers (0-9):
 Keyboard (.,/$#%): X
                                                Operations Allowed:
 Special (©®™Σπ):
                                                  Same Field:
                                                               ALL
LOGICAL ELEMENTS
Key Type:
             Non:
              Primary:
              Foreign:
                                                  Other Fields: _
              Alternate: _
                                                               AT.T.
Key Structure: Simple: X
              Composite: _
Uniqueness:
              Non-unique:
              Unique:
                                                  Value Expr.:
Null Support: Nulls OK:
                                                               ALL
              No nulls:
Values Entered By: User:
                 System: X
Required Value:
                                                NOTES:
               No:
                 Yes:
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:
```

```
GENERAL ELEMENTS
                                                    Enter later, edits not allowed: _
                                                    Not determined at this time:
Field Name:
Costumes_Rented.Staff_ID
                                                  Comparisons Allowed:
                                                    Same Field:
Specification Type:
                                                                 ALL
                                                                 =
                                                                      Χ
 Unique:
 Unique: _
Generic: _
                                                                 >
 Replica: X
                                                                 >=
Parent Table:
                     Costumes Rented
                                                                  ! =
Label:
Source Specification: Staff Members
Shared By: Staff
Aliases:
                                                    Other Fields:
                   The id that
                                                                 ALL
Description:
corresponds to a staff member in the staff
                                                                 =
table, to link the costume to which staff
rented it out.
                                                                 >=
                                                                      Х
                                                                  1 =
PHYSICAL ELEMENTS
Data Type:
                     INT
                                                    Value Expr.:
Length:
                                                                 ALL
Decimal Places:
                                                                 =
Input Mask:
Display Format:
Character Support:
 Letters (A-Z):
 Numbers (0-9):
 Keyboard (.,/$#%): _
                                                  Operations Allowed:
 Special (©®™Σπ):
                                                    Same Field:
                                                                 ALL
LOGICAL ELEMENTS
Key Type:
              Non:
              Primary:
              Foreign:
                                                    Other Fields: _
              Alternate: _
                                                                 ALL
Key Structure: Simple:
              Composite: X
              Non-unique: X
Uniqueness:
              Unique:
                                                    Value Expr.:
Null Support: Nulls OK:
                                                                 ALL
              No nulls:
Values Entered By: User:
                  System: X
Required Value:
                  No:
                                                 NOTES:
                  Yes:
Default Value:
Range of Values:
Edit Rule:
 Enter now, edits allowed:
 Enter now, edits not allowed: X
 Enter later, edits allowed:
```

GENERAL ELEMENTS Comparisons Allowed: Field Name: Same Field: Costumes_Rented.Costume_ID ALL Χ -Specification Type: Unique: >= Unique: _ Generic: _ X Replica: X Parent Table: Costumes Rented Label: Source Specification: Other Fields: Shared By: Costumes_Inventory ALL Aliases: = Description: The unique id of the costume that is rented out. >= X 1 = PHYSICAL ELEMENTS Data Type: TNT Value Expr.: Length: ALL Decimal Places: = Input Mask: Display Format: Character Support: ! = Letters (A-Z): Numbers (0-9): Keyboard (.,/\$#%): _ Special (©®™Σπ): Operations Allowed: Same Field: ALL LOGICAL ELEMENTS + Key Type: Non: Primary: Foreign: X Other Fields: _ Alternate: _ A T.T. Key Structure: Simple: Composite: X Non-unique: X Uniqueness: Unique: Value Expr.: Null Support: Nulls OK: ALL No nulls: X Values Entered By: User: System: X Required Value: NOTES: No: Yes: 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: _

```
GENERAL ELEMENTS
                                                   Not determined at this time:
Field Name:
                                                Comparisons Allowed:
Costumes_Rented.Rental_CheckoutDate
                                                   Same Field:
                                                                ALL X
Specification Type:
 Unique:
 Generic: X
 Replica: _
Parent Table:
                    Costume Rented
Label:
                    Checkout Date
Source Specification: Date
Shared By:
                                                   Other Fields:
                                                                ALL X
Aliases:
Description:
                   The time and date
that the costume was checked out by.
                                                                >=
PHYSICAL ELEMENTS
Data Type:
                    TIMESTAMP
Length:
                     365
                                                   Value Expr.:
Decimal Places:
                                                                ALL X
Input Mask:
                     Date input box with
MM-DD-YYYY
Display Format:
Character Support:
 Letters (A-Z):
 Numbers (0-9):
 Keyboard (.,/$#%):
 Special (©®™Σπ):
                                                 Operations Allowed:
                                                   Same Field:
                                                                ALL
                                                                     Χ
LOGICAL ELEMENTS
                                                                +
                                                                     Χ
              Non:
Key Type:
                         Х
              Primary:
              Foreign:
              Alternate: _
                                                   Other Fields:
                                                                AT.T.
Key Structure: Simple:
              Composite: _
                                                                     Χ
Uniqueness:
              Non-unique: _
              Unique:
                                                   Value Expr.:
Null Support: Nulls OK:
                                                                ALL
              No nulls:
Values Entered By: User:
                  System: X
Required Value:
                                               NOTES:
                 No:
                 Yes:
Default Value: CURRENT TIMESTAMP
Range of Values: Every day in the year.
Edit Rule:
 Enter now, edits allowed:
 Enter now, edits not allowed:
 Enter later, edits allowed:
 Enter later, edits not allowed:
```

```
Not determined at this time:
GENERAL ELEMENTS
Field Name:
                                                Comparisons Allowed:
Costumes_Rented.Rental_DueDate
                                                  Same Field:
                                                               ALL X
Specification Type:
 Unique:
 Generic: X
 Replica: _
Parent Table:
                   Costumes Rented
Label:
                    Return By
Source Specification: Date
Shared By:
                                                  Other Fields:
                                                               ALL X
Aliases:
Description: The date and time
                                                               =
that the costume is to be returned by.
                                                               >=
PHYSICAL ELEMENTS
Data Type:
                    TIMESTAMP
Length:
                                                  Value Expr.:
Decimal Places:
                                                               ALL X
Input Mask:
                    Date input box with
MM-DD-YYYY
Display Format:
Character Support:
 Letters (A-Z):
 Numbers (0-9):
 Keyboard (.,/$#%): _
 Special (©®™Σπ):
                                                Operations Allowed:
                                                  Same Field:
                                                               ALL
LOGICAL ELEMENTS
             Non:
                       X
Key Type:
              Primary:
              Foreign:
                                                  Other Fields: _
              Alternate: _
                                                               A T.T.
Key Structure: Simple:
              Composite: _
                                                                    Χ
Uniqueness:
              Non-unique: X
              Unique:
                                                  Value Expr.:
Null Support: Nulls OK: X
                                                               ALL
              No nulls: _
Values Entered By: User: X
                 System: _
Required Value:
                                                NOTES:
                 No:
                         Χ
                 Yes:
Default Value:
Range of Values: Every day in the year.
Edit Rule:
 Enter now, edits allowed:
 Enter now, edits not allowed:
 Enter later, edits allowed:
```

Enter later, edits not allowed: _

```
GENERAL ELEMENTS
                                                  Not determined at this time:
Field Name:
                                                Comparisons Allowed:
Costumes_Rented.Rental_ReturnedDate
                                                  Same Field:
                                                               ALL X
Specification Type:
 Unique:
 Generic: X
 Replica: _
Parent Table:
                   Costumes Rented
Label:
                    Returned Date
Source Specification: Date
Shared By:
                                                  Other Fields:
                                                               ALL X
Aliases:
Description: — The date and time by
which the costume is returned.
                                                               >=
PHYSICAL ELEMENTS
Data Type:
                    TIMESTAMP
Length:
                                                  Value Expr.:
Decimal Places:
                                                               ALL X
Input Mask:
                    Date input box with
MM-DD-YYYY
Display Format:
Character Support:
 Letters (A-Z):
 Numbers (0-9):
 Keyboard (.,/$#%): _
 Special (©®™Σπ):
                                                Operations Allowed:
                                                  Same Field:
                                                               ALL
LOGICAL ELEMENTS
             Non:
                       X
Key Type:
              Primary:
              Foreign:
                                                  Other Fields: _
              Alternate: _
                                                               A T.T.
Key Structure: Simple:
              Composite: _
                                                                    Χ
Uniqueness:
              Non-unique: X
              Unique:
                                                  Value Expr.:
Null Support: Nulls OK: X
                                                               ALL
              No nulls: _
Values Entered By: User: X
                 System: _
Required Value:
                                                NOTES:
                 No:
                         Χ
                 Yes:
Default Value:
Range of Values: Every day in the year.
Edit Rule:
 Enter now, edits allowed:
 Enter now, edits not allowed:
 Enter later, edits allowed:
```

Enter later, edits not allowed: _

```
GENERAL ELEMENTS
                                                   Not determined at this time:
Field Name: Sightings. Pokemon Name
                                                 Comparisons Allowed:
                                                   Same Field:
Specification Type:
                                                                 ALL
 Unique: _
                                                                 =
 Generic: _
 Replica: X
                                                                 >=
Parent Table:
                     Sightings
Label:
Source Specification:
Shared By: Sightings, Orders,
Pokemon, Pokemon Inventory
                                                   Other Fields:
Aliases: _ _ 
Description: A foreign key that
                                                                 ALL
                                                                 =
connects the sighting record to the pokemon
species that was sighted.
                                                                 >=
                                                                 ! =
                                                                     Х
PHYSICAL ELEMENTS
Data Type:
                   VARCHAR (15)
                                                   Value Expr.:
                   15 Characters
                                                                 ALL
Decimal Places:
Input Mask:
Display Format:
Character Support:
 Letters (A-Z):
 Numbers (0-9):
 Keyboard (.,/$#%):
  Special (\mathbb{O}\mathbb{B}^{TM}\Sigma\pi): X
                                                 Operations Allowed:
                                                   Same Field:
                                                                 ALL
LOGICAL ELEMENTS
Key Type:
              Non:
              Primary:
              Foreign:
                                                   Other Fields: _
              Alternate: _
                                                                 A T.T.
Key Structure: Simple:
              Composite: X
Uniqueness:
              Non-unique: X
              Unique: _
                                                   Value Expr.:
Null Support: Nulls OK:
                                                                 ALL
              No nulls: X
Values Entered By: User:
                  System: X
Required Value:
                                                 NOTES:
                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:
```

GENERAL ELEMENTS		Comparisons Allowed: Same Field:		
Field Name: Sightings	.Sighting_Location		ALL =	_ X
Specification Type: Unique: Generic: X Replica: Parent Table:	Sightings		> >= != < <=	- X -
Label: Source Specification		Other Fields:		_
Shared By: Aliases:	_		ALL =	_ X
Description:	The last location		>	_
that the sighted poke	emon was spotted at.		>= != <	_ X _
PHYSICAL ELEMENTS			<=	-
Data Type: Length: Decimal Places: Input Mask: Display Format: Character Support:	VARCHAR(40) 40 Characters	Value Expr.:	- ALL = > >=	_ _ _ _
Letters (A-Z):	х		<	_
Numbers (0-9): Keyboard (.,/\$#%): Special (©®™Σπ):	X X	Operations Allow	<= wed:	_
11	=	Same Field:	_	
LOGICAL ELEMENTS			ALL +	_
Key Type: Non:			- *	_
Prima	-		/	_
Foreiq Altern	n: mate: X	Other Fields:	_ ALL	
Key Structure: Simple Compos	e: _ iite: X		+ - *	_ _ _
Uniqueness: Non-un Unique	nique: X		/	_
Null Support: Nulls No nul	-	Value Expr.:	_ ALL + -	_ _
Values Entered By: Us	ser: X vstem: _		* /	_ _ _
Required Value: No	o: _ es: X	NOTES:		
Default Value: _				
Range of Values: _				
Edit Rule: Enter now, edits and Enter now, edits no Enter later, edits Enter later, edits Not determined at 1	ot allowed: X allowed: _ not allowed: _			

GENERAL ELEMENTS		Comparisons Allowed:					
Field Name: Si	ghtings	.Sigh	ting_Time		Same Field:	ALL	Х
Specification	Tr					= >	_
=	Type:					>=	_
Unique: _ Generic: X						!=	_
						:=	_
Replica: _		المالية	. 4			<=	_
Parent Table: Label:			-			<=	_
Source Specifi	cation:	Date	e and time.		Other Fields	: _	
Shared By:						ALL	_
Aliases:		_				=	_
Description:		The	time that the			>	_
sighting happe	ened.					>=	_
						! =	_
						<	_
PHYSICAL ELEME	ENTS					<=	_
Data Type:		TIME	ESTAMP				
Length:		_			Value Expr.:		
Decimal Places	3:	_				ALL	
Input Mask:		DD/M	MM/YYYY			=	_
HH:MM:SS						>	_
Display Format	::					>=	_
Character Supp		_				! =	_
Letters (A-2						<	_
Numbers (0-9		_ X				<=	_
Keyboard (.,							_
Special (©®™		_			Operations All	owed:	
11 11 1 (11	, .	_			Same Field:		
						— ALL	
LOGICAL ELEMEN	ITS					+	_
20010112 2221121						_	_ X
Key Type:	Non:					*	
ncy Type.	Primar	~	_			/	_
	Forei		_			/	-
	Altern		_ X		Other Fields		
	111 0011	iacc.	27		Other ricias	· _ ALL	
Key Structure:	Cimple					+	-
ney structure.			_ X			Т-	_
	Compos	orte.	Λ			*	_
Uniqueness:	Non-ur					/	-
Uniqueness:		_	· A			/	_
	Unique	•	=		Value Error .		
Niell Commont.	NT 1 1	017.			Value Expr.:	_	
Null Support:			_ X			ALL +	-
	No nul	IIS:	Χ			+	-
77.1 T.I	1 50 77.		17			*	_
Values Entered	_					,	_
	57	stem:	: X			/	_
Dami'nad 17al			77		NOMEC.		
Required Value		:	X		NOTES:		
	16	es:	_				
Default Value:	: Cī	JRRENI	r TIMESTAMP				
Range of Value	es: _						
Edit Rule:							
Enter now, e			_				
Enter now, e	edits no	t all	lowed: X				
Enter later,	edits	allow	wed:				
Enter later,	edits	not a	allowed: _				
Not determin	ned at t	his t	cime: _				

```
GENERAL ELEMENTS
                                                  Same Field:
                                                               ALL X
Field Name: Sightings.Sighting_NumPokemon
Specification Type:
 Unique:
                                                               ! =
 Generic: X
 Replica: _
Parent Table:
                   Sightings
                                                  Other Fields: _
Label:
Source Specification: _
                                                               ALL
Shared By:
                                                               =
Aliases:
Description: The number of pokemon
                                                               >=
sighted.
                                                                ! =
PHYSICAL ELEMENTS
Data Type:
                    TNT
                                                  Value Expr.:
Length:
                                                               AT.T.
Decimal Places:
Input Mask:
Display Format:
Character Support:
                                                               ! =
 Letters (A-Z):
                                                               <
 Numbers (0-9):
 Keyboard (.,/$#%): _
 Special (©®™Σπ):
                                                Operations Allowed:
                                                  Same Field:
                                                               ALL X
LOGICAL ELEMENTS
Key Type:
              Non:
              Primary:
              Foreign:
                                                  Other Fields: _
              Alternate: _
                                                               ALL
Key Structure: Simple:
             Composite: _
             Non-unique: _
Uniqueness:
              Unique:
                                                  Value Expr.:
Null Support: Nulls OK:
                                                               ALL
              No nulls: X
Values Entered By: User: X
                 System: _
                                                NOTES:
Required Value:
                 No:
                 Yes:
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:
```

GENERAL ELEMENTS		Comparisons All	lowed:	
Field Name:	Staff.Staff_ID	same rieid:	ALL	-
Specification Type Unique: _ x Generic: _ Replica: _ Parent Table:	pe: Staff		> >= != < <=	_x _ _x _ _
Label: Source Specificat Shared By:	cion: _	Other Fields:	_ ALL	_
Aliases:			=	_
Description: number of every s database	_ The unique ID staff person if the		> >= != < <=	_ _ _ _
PHYSICAL ELEMENTS				_
Data Type: Length:	_Numeric	Value Expr.:	- ALL	
Decimal Places:	0		=	_
Input Mask:	_		>	_
Display Format:			>= !=	_
Character Support Letters (A-Z):	- i		: -	_
Numbers (0-9):	_ x		<=	_
Keyboard (.,/\$	_			
Special (©®™Σπ)): _	Operations Allo Same Field:	wed:	
		same Field:	- ALL	
LOGICAL ELEMENTS			+	_
			-	_
	on:		*	_
	rimary: _x oreign:		/	_
	lternate: _	Other Fields:	- ALL	
Key Structure: Si	imple: x		+	_
=	omposite: _		-	_
			*	_
	on-unique: _ nique: _x		/	_
01		Value Expr.:		
Null Support: Nu	alls OK: _		ALL	_
No	o nulls: _x		+	_
Values Entered By	Hser.		*	_
varues Enected by	System: _x		/	_
Required Value:	No: _ Yes: _x	NOTES:		
Default Value:	-			
Range of Values:	=			
Edit Rule:				
Enter now, edit Enter now, edit Enter later, ed	cs not allowed: _ x dits allowed: _ dits not allowed: _			

GENERAL ELEMENTS		Same Field:	=	
Field Name:	Staff.Staff_LastName		=	X _
Charification Erman			> >=	_
Specification Type: Unique:			!=	-
Generic: X			<	_
Replica: _			<=	_
	Staff			
Label:		Other Fields:	_	
Source Specification: Shared By:	rerson name		ALL =	-
Aliases:			>	_
Description:	The last name of a		>=	_
staff member who work	s at the facility.		! =	_
			<	_
PHYSICAL ELEMENTS			<=	_
Data Type:	VARCHAR (25)	Value Expr.:		
Length:	25 Characters	-	ALL	_
Decimal Places:	_		=	Χ
Input Mask:	_		>	_
Display Format:	_		>= !=	_ X
Character Support: Letters (A-Z):	X		: - <	Λ
Numbers (0-9):	22		<=	_
Keyboard (.,/\$#%):	_ _			_
Special (©®™Σπ):	_	Operations Allo	wed:	
		Same Field:	- ALL	
LOGICAL ELEMENTS			+	-
			-	_
Key Type: Non:	X		*	_
Primar	-		/	_
Foreig Altern	-	Other Fields:		
	=		- ALL	
Key Structure: Simple	e : _		+	_
Compos	site: _		-	_
Uniqueness. Non un	ique: X		* /	_
Uniqueness: Non-un Unique	·:		/	_
-1	=	Value Expr.:		
Null Support: Nulls	OK: _		ALL	_
No nul	.ls: X		+	_
Values Entered By: Us	ser: X		*	-
-	stem:		/	_
_	-			_
Required Value: No	-	NOTES:_Numeric		
Ye	es: X			
Default Value:				
_				
Range of Values: _				
Edit Rule:				
Enter now, edits al				
Enter now, edits not allowed: _ Enter later, edits allowed:				
Enter later, edits Enter later, edits	-			
Not determined at t	-			
	-			

Comparisons Allowed:

```
GENERAL ELEMENTS
                                                  Same Field:
                    Staff.Staff_FirstName
Field Name:
                                                               ALL X
Specification Type:
 Unique:
 Generic: X
                                                               ! =
 Replica: _
Parent Table:
                   Staff
Label:
Source Specification: Person Name
                                                  Other Fields:
Shared By:
                                                               ALL
Aliases:
                                                               =
Description: The first name of a
staff member who works to catch the pokemon
                                                               >=
                                                                ! =
                                                               <
PHYSICAL ELEMENTS
                   VARCHAR (25)
Data Type:
                   25 Characters
Length:
                                                  Value Expr.:
Decimal Places:
                                                               AT.T.
Input Mask:
                                                               =
Display Format:
Character Support:
                                                               >=
 Letters (A-Z):
                                                               ! =
 Numbers (0-9):
 Keyboard (.,/$#%): _
 Special (©®™Σπ):
                                                Operations Allowed:
                                                  Same Field:
LOGICAL ELEMENTS
                                                               ALL
Key Type:
              Non:
              Primary:
              Foreign:
              Alternate: _
                                                  Other Fields: _
Key Structure: Simple:
                                                               A T.T.
             Composite: _
Uniqueness:
             Non-unique: X
              Unique:
Null Support: Nulls OK:
                                                  Value Expr.:
                                                               ALL
              No nulls: X
Values Entered By: User: X
                 System: _
Required Value:
                 No:
                                                NOTES
                 Yes:
Default Value:
Range of Values: _
Edit Rule:
 Enter now, edits allowed:
 Enter now, edits not allowed:
 Enter later, edits allowed:
 Enter later, edits not allowed: _
 Not determined at this time:
Comparisons Allowed:
```

A3: BUSINESS RULES

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.

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: 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:

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.

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.

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: 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.

```
RULE INFORMATION
Statement: Each costume from the inventory can be rented to only one staff member at a time.
Constraint: _
Type:
        Database Oriented:
        Application Oriented
Category: Field Specific:
        Relationship Specific: X
Test On: Insert:
         Delete:
                            X
        Update:
STRUCTURES AFFECTED
Field Names:
Table Names: _Costumes_Rented, Costumes_Inventory
FIELD ELEMENTS AFFECTED
Physical Elements: Data Type:
                 Decimal Places:
                 Character Support:
                 Input Mask:
                Display Format:
Logical Elements: Key Type:
                 Key Structure:
                 Null Support:
                 Uniqueness:
                 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:
```

RULE INFORMATION Statement: Number of Pokemon sighted has to be greater than 0. ${\tt Constraint: _ the \ field \ number_of_pokemon \ in \ the \ sightings \ table \ must \ be \ an \ int \ greater \ than}$ Application Oriented _ X Type: Database Oriented: Category: Field Specific: Field Specific: _ X Relationship Specific: _ Test On: Insert: Delete: _ X Update: STRUCTURES AFFECTED Field Names: _ number_of_pokemon Table Names: FIELD ELEMENTS AFFECTED Physical Elements: Data Type: _ X Length: _ _ X Decimal Places: Character Support: Input Mask: Display Format: Logical Elements: Key Type: Key Structure: Null Support: Values Entered By: Default Value: 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: _

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:

Application Oriented

Category: Field Specific:

Relationship Specific: X

Test On: Insert:

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 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

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 Database Oriented: Application Oriented Category: Field Specific: Relationship Specific: X Test On: Insert: 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:

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

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: Application Oriented Category: Field Specific: Relationship Specific: X Test On: Insert: 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: Null Support: Uniqueness: Values Entered By: Default Value: Derault 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: __

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:

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.

RULE INFORMATION

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

 ${\tt Constraint: The \ degree \ of \ participation \ from \ staff \ to \ costumes_rented \ is \ only \ limited}$

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.

Appendix A3

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: 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.

Appendix A3

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: Application Oriented

Category: Field Specific:

Relationship Specific: X

Test On: Insert:

Delete: 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 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.

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:

Application Oriented

Category: Field Specific:

Relationship Specific: _

Test On: Insert:

Delete:

Update: X

STRUCTURES AFFECTED

Field Names: Pokemon_Price

Table Names:

FIELD ELEMENTS AFFECTED

Physical Elements: Data Type:

Length: __ Decimal Places:

Decimal Places:
Character Support:
Input Mask:
Display Format:

Logical Elements: Key Type:

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