

Justin Hayne, Kayo Zirtidis

## **Summary of Feedback and Changes to Initial Project:**

Added numerical details to project overview to better illustrate purpose and function of database.  
Changed Employees to Guests entity relationship to Employees to Rooms relationship which better reflects how the inn functions.

Changed quantity attribute in TavernInventory entity to quantityInStock to differentiate from quantity in Transactions entity.

Changed name columns for employees and guests, now have separate columns for first and last names for each entity instead.

EmployeeID added as a foreign key to Rooms entity and table to reflect relationship.

Added Titles attribute to Employees entity and table allowing for specific position of employee to be stated and categorized.

Added (145) to varchar and added (11) to int for attributes to restrict possible inputs.

Added a delete query to the Transactions table allowing for better control over transaction record, especially on removal of a guest from the database.

Updated column names to be more user friendly instead of using camel case column names.

Added a dropdown menu for foreign keys for CRUD operations allowing user to pick attribute associated with ID instead of the ID itself.

Added an index page to serve as a home page and directory.

Included project overview and database description on index page.

Changed employee ID foreign key to be nullable in Rooms table.

Added Item Name and Guest Name as foreign keys to the Transactions table for clarity.

Implemented CSS to add more appropriate D&D style theming to database.

Implemented cascade for Guests table, when deleting a Guest the transactions associated with that guest will also be removed from the Transactions table.

Added unitPrice attribute to Transactions table so totalPrice can be calculated from the product of unitPrice and quantity.

## **Updated Project Outline:**

**Overview:** In the world of Dungeons & Dragons, the D&D Inn Management System aims to streamline the operations of inns, which can contain taverns, catering to thousands of adventurers each year. The Inns in the D&D world are seeing an increase in patrons as more adventures are picking up their swords and looking for glory. There have been over 20,000 stays in large city Inns. These Inns not only have patrons that stay, some just come in for a quick meal or drink. Food is becoming hard to track with over 50,000 meals being served yearly as well as 100,000

drinks, as we all know a pint of ale is the best thing after a day of adventure. The Inns need help and have around 10–20 employees per establishment to help with the increase in business. The database-driven website will record transactions, manage guest information, handle inventory for the tavern, and track the hiring of employees for specialized services such as taking down adventurer information and receiving payment, preparing food and drink, and housekeeping.

### **Updated Database Outline:**

#### **❖ Guests:**

##### **➤ Attributes:**

- guestID: int(11), auto\_increment, unique, not NULL, PK
- firstName: varchar(145), not NULL
- lastName: varchar(145), not NULL
- race: varchar(145)
- class: varchar(145)
- gold: int(11)
- roomNumber: int(11), FK (linked to Rooms)

##### **➤ Purpose:** Records details of guests staying at the inn.

#### **❖ Rooms:**

##### **➤ Attributes:**

- roomNumber: int(11), auto\_increment, unique, not NULL, PK
- roomType: varchar(145)
- price: int(11)
- availability: tinyint(1)
- employeeID int(11), FK (linked to Employees)

##### **➤ Purpose:** Manages information about available rooms.

#### **❖ TavernInventory:**

##### **➤ Attributes:**

- itemID: int(11), auto\_increment, unique, not NULL, PK
- itemName: varchar(145), not NULL
- quantityInStock: int(11)
- price: int(11)

##### **➤ Purpose:** Tracks inventory in the inn's tavern.

#### **❖ Employees:**

##### **➤ Attributes:**

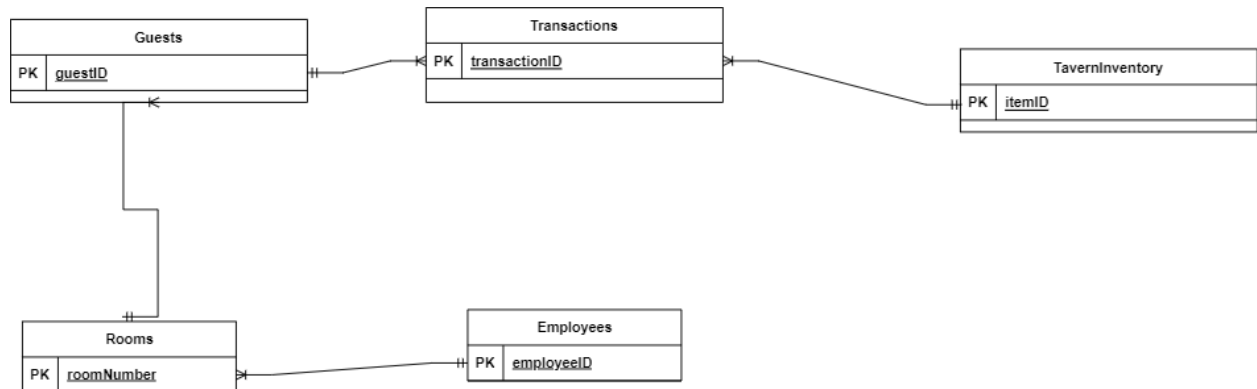
- employeeID: int(11), auto\_increment, unique, not NULL, PK
- title: varchar(145), not NULL
- employeeFirstName: varchar(145), not NULL
- employeeLastName: varchar(145), not NULL

- serviceType: varchar(145)
- Purpose: Manages hiring of employees for various services.
- ❖ **Transactions:**
  - Attributes:
    - transactionID: int(11), auto\_increment, unique, not NULL, PK
    - guestID: int(11), FK (linked to Guests)
    - guestName: varchar(145), FK (linked to Guests)
    - itemID: int(11), FK (linked to TavernInventory)
    - itemName: varchar(145), FK (linked to TavernInventory)
    - quantity: int(11)
    - unitPrice: int(11)
    - totalPrice: int(11)
    - transactionDate: date
  - Purpose: Records individual transactions between guests and the tavern inventory.

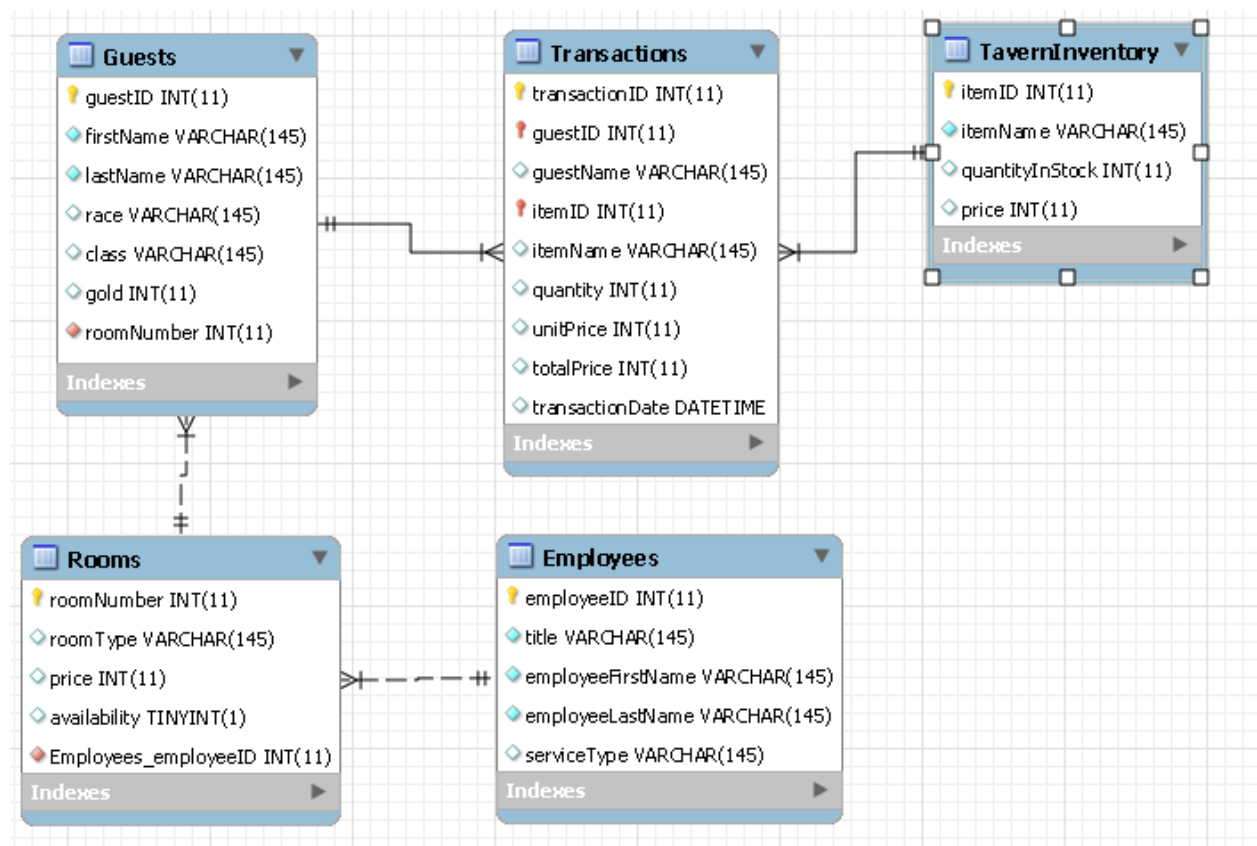
## Relationships:

- ❖ **Guests and Rooms:**
  - Relationship: 1:M relationship
  - Explanation: Each guest can stay in one room, but a room can have multiple guests (e.g. a group of adventurers sharing a room).
- ❖ **Guests and TavernInventory:**
  - Relationship: M:N relationship
  - Explanation: Guests can purchase items from the tavern inventory, and each item can be bought by multiple guests.
- ❖ **Rooms and Employees:**
  - Relationship: 1:M relationship
  - Explanation: Employees will interact with multiple rooms to care for, depending on the task needed.
- ❖ **Guests and Transactions:**
  - Relationship: 1:M relationship
  - Explanation: Each guest can make multiple transactions, but each transaction is associated with only one guest.
- ❖ **TavernInventory and Transactions:**
  - Relationship: 1:M relationship
  - Explanation: Each item in the tavern inventory can be purchased multiple times, but each transaction is associated with only one item.

## ERD:



## Schema:



**Sample Data:**

**Guests Table Sample Data(with roomNumber foreign key):**

Guest ID	First Name	Last Name	Race	Class	Gold	Room Number	
1	Elowen	Swiftblade	Human	Warrior	100	1	Delete
2	Thrain	Fireheart	Elf	Mage	150	2	Delete
3	Seraphina	Moonshadow	Dwarf	Rogue	80	3	Delete

**Employees Table Sample Data:**

Employee ID	Title	Employee First Name	Employee Last Name	Service Type	
1	Innkeeper	Bob	Connors	Management	Delete
2	Maid	Alice	Wonderlands	Housekeeping	Delete
3	Chef	Charlie	Brownson	Kitchen	Delete
4	Server	Quinlan	Stargazer	Tavern	Delete

**Tavern Inventory Table Sample Data:**

Item ID	Item Name	Quantity In Stock	Price	
1	Health Potion	20	50	Delete
2	Mana Elixer	15	25	Delete
3	Roast Chicken	30	10	Delete
4	Dwarf's Ale	50	8	Delete
5	Rabbit Stew	45	6	Delete
8	Weapon	1	1	Delete

Rooms Table Sample Data (with the NULLABLE foreign key Employee ID):

Room Number	Room Type	Price	Availability	Employee ID	
1	Single	50	0	2	Delete
2	Double	80	0	2	Delete
3	Suite	120	0	3	Delete
20	Royal Suite	500	1		Delete
21	Super Suite	1000	1	1	Delete

Transactions Table Sample Data(with guestID and itemID foreign keys):

Transaction ID	Guest ID	Guest Name	Item ID	Item Name	Quantity	Unit Price	Total Price	Transaction Date	
1	1	Elowen Swiftblade	1	Health Potion	2	50	100	Wed Feb 07 2024 00:00:00 GMT-0800 (Pacific Standard Time)	Delete
2	2	Thrain Fireheart	3	Roast Chicken	1	10	10	Thu Feb 08 2024 00:00:00 GMT-0800 (Pacific Standard Time)	Delete
3	3	Seraphina Moonshadow	2	Mana Elixir	3	25	75	Fri Feb 09 2024 00:00:00 GMT-0800 (Pacific Standard Time)	Delete

UI Screen Captures:

Guests Table Read and Delete(with CASCADE delete to Transactions Table):

Guest ID	First Name	Last Name	Race	Class	Gold	Room Number	
1	Elowen	Swiftblade	Human	Warrior	100	1	Delete
2	Thrain	Fireheart	Elf	Mage	150	2	Delete
3	Seraphina	Moonshadow	Dwarf	Rogue	80	3	Delete

Guests Table Add New Guest:

Adding New Guest to Guest Table.

To add a new guest, please enter their information below and click 'Submit'!

First Name:

Last Name:

Race:

Class:

Gold:

Room Number:

Select a Room

Submit Query

### Guests Table Search for Specific Guest Using Last Name:

## Search for a Guest Using Their Last Name.

Search by last name using the field below. Partial last names are OK too!

Search by Last Name:

### Guests Table Update Guest's Room Information:

#### Updating A Guest's Room Form

To update a specific Guest's room select their name from the drop-down menu on the left and their desired room from the drop down menu on the right

Full name:   Room:

### Employees Table Read and Delete:

Employee ID	Title	Employee First Name	Employee Last Name	Service Type	
1	Innkeeper	Bob	Connors	Management	<input type="button" value="Delete"/>
2	Maid	Alice	Wonderlands	Housekeeping	<input type="button" value="Delete"/>
3	Chef	Charlie	Brownson	Kitchen	<input type="button" value="Delete"/>
4	Server	Quinlan	Stargazer	Tavern	<input type="button" value="Delete"/>

### Employees Table Add a New Employee:

#### Adding New Employee to Employee Information Table.

To add a new employee, please enter their information below and click 'Submit'!

Title:  Employee First Name:  Employee Last Name:  Service Type:

### Employees Table Search for a Specific Employee Using Last Name:

## Search for an Employee Using Their Last Name.

Search by last name using the field below. Partial last names are OK too!

Search by Last Name:

### Employees Table Update an Employee's Information:

#### Updating an Employee's Information Form

To update a specific Employee's room select their name from the drop-down menu on the left

Employee Name:  Title:  Service Type:

### TavernInventory Table Read and Delete:

Item ID	Item Name	Quantity In Stock	Price	
1	Health Potion	20	50	<input type="button" value="Delete"/>
2	Mana Elixir	15	25	<input type="button" value="Delete"/>
3	Roast Chicken	30	10	<input type="button" value="Delete"/>
4	Dwarf's Ale	50	8	<input type="button" value="Delete"/>
5	Rabbit Stew	45	6	<input type="button" value="Delete"/>
8	Weapon	1	1	<input type="button" value="Delete"/>

### TavernInventory Table Add a New Item:

#### Adding New Item to Tavern Inventory Table.

To add a new item, please enter their information below and click 'Submit'!

Item Name:  Quantity in Stock:   Price:

### TavernInventory Table Search for an Item Using Item Name:

#### Search for an Item Using the Item Name.

Search by item name using the field below.

Search by Item Name:



## TavernInventory Table Update an Item's Information:

### Updating an Item's Information.

To update a specific item select the item's name from the drop-down menu on the left.

Item Name:  Quantity in Stock:  Price:

## Rooms Table Read and Delete:

Room Number	Room Type	Price	Availability	Employee ID	
1	Single	50	0	2	<input type="button" value="Delete"/>
2	Double	80	0	2	<input type="button" value="Delete"/>
3	Suite	120	0	3	<input type="button" value="Delete"/>
20	Royal Suite	500	1		<input type="button" value="Delete"/>
21	Super Suite	1000	1	1	<input type="button" value="Delete"/>

## Rooms Table Add a New Room:

### Adding New Room to Rooms Table.

To add a new room, please enter the information below and click 'Submit'!

Room Type:  Price:  Availability: ☐ No ☐ Yes Employee Name:

## Rooms Table Search for a Specific Room Using the Room Type:

### Search for a Room Using The Room Type.

Search by room type using the field below.

Search by Room Type:

Rooms Table Updating Room Information(with a NULLABLE foreign key Employee Name):

Updating A Room Form

To update a specific room select the room type from the drop-down menu on the left.

Room: 

Select a Room

 Room Type:  Price:  Availability: 

NoYes

 Employee Name: 

Select an Employee

Submit Query

Transactions Table Read and Delete (delete from a M:N relationship):

Transaction ID	Guest ID	Guest Name	Item ID	Item Name	Quantity	Unit Price	Total Price	Transaction Date	
1	1	Elowen Swiftblade	1	Health Potion	2	50	100	Wed Feb 07 2024 00:00:00 GMT-0800 (Pacific Standard Time)	Delete
2	2	Thrain Fireheart	3	Roast Chicken	1	10	10	Thu Feb 08 2024 00:00:00 GMT-0800 (Pacific Standard Time)	Delete
3	3	Seraphina Moonshadow	2	Mana Elixer	3	25	75	Fri Feb 09 2024 00:00:00 GMT-0800 (Pacific Standard Time)	Delete

Transactions Table Add a New Transaction:

Add a New Transaction

To add a new transaction, please enter their information below and click 'Submit'!

Guest: 

Select a Guest

 Item: 

Select an Item

 Quantity:  Date: 

mm / dd / yyyy

Submit Query

Transactions Table Search for a Specific Transaction Using Guest Last Name:

Search for a Transaction by Guest Last Name.

Search by guest using the field below.

Search by Guest Last Name: 

Submit Query

Reset

Transactions Table Update Transaction Information(update for a M:N relationship):

## Updating A Transaction

To update a transaction select their guest from the drop-down menu on the left and add the new information.

Transaction Number: 

Select a Transaction ▾

 Guest: 

Select a Guest ▾

 Item: 

Select an Item ▾

 Quantity:  Date: 

mm / dd / yyyy 📅

Update