***Project Proposal***

Business Description:

Our project idea is to implement an inventory fulfillment database system for hotel rooms in Hotel Drangonfly located in Mumbai, Maharashtra. This organization resides within the Indian tourism and hospitality industry. The Indian tourism and hospitality industry has emerged as one of the key drivers of growth among the services sector in India. Hotel Dragonfly provides hotel lodging, banquet halls for corporate and social events and restaurant services. The hotel itself is stand-alone and it does own separate service apartments. They have 30 rooms and 10 service apartments along with a restaurant and 3 banquet halls. The hotel has close to 80 employees in total. The hotel is proximal to the international airport so it caters to business as well as leisure travelers. The hotel is in the process of entirely digitizing their operations.

Problem Statement:

Hotels require a large amount of inventory for both guest rooms and other accommodations such as restaurants and banquet halls. This makes it crucial for any company within the hospitality industry to streamline their supply chain to ensure that there is enough inventory to provide excellent service to their customers. Currently, Hotel Dragonfly keeps track of their inventory with a combination of manual record keeping and excel spreadsheets. This is insufficient and can lead to several different issues. This includes program-data dependence, duplication of data, limited data sharing, lengthy development times, and excessive program maintenance, among others.

Proposed Solution:

The hotel requires various food items, towels, bedsheets and toiletries on a daily basis for its proper functioning. It would benefit from a well-defined and streamlined database which help them to keep an accurate track of their daily utilization of the items. This will aid them in their pricing analysis of the rooms and in maintaining a proper supply chain so that the inventory does not run out. In the proposed system, inventory fulfillment for rooms and the restaurant will be considered, along with the purchasing of inventory when it is low, and the reservation process as well. Keeping track of shift length for employees was considered, but not included due to scope of the project and it not being very related to inventory fulfillment.

The business rules are as follows: 1) There must be at least a week’s requirement of items in the inventory so as to make sure that the business does not run out of any items. 2) The respective department heads must send out their daily inventory requirements for the next day before the end of that business day (8am-5pm). 3) Inventory must be replenished daily for rooms that are occupied. 4) Inventory must be replenished according to the average room occupancy rate. 5) Pricing of the rooms has to be relative to the number of rooms booked that day.

Users:

**Hotel Manager-** Takes care of daily administration and employee scheduling

**Sales Head-** Oversees rooms and banquet hall events and bookings

**Purchase Manager-** Manages the inventory of the food items and other hotel supplies

**Restaurant Manager-** Manages the restaurant and the cafe in the hotel

The hotel manager, sales head, restaurant manager and the purchase manager have equal access to the database. The sales head, restaurant manager and the hotel manager are in constant touch with the purchase manager so as to communicate their daily requirements for their respective departments to him. The purchase manager then supplies them with their requirements and subsequently replenishes the items by ordering them.

Potential Entities and Attributes:

Inventory minimums are bolded and in parentheses after their respective attribute.

**Customer**

* Customer ID - PK
* Customer First Name
* Customer Last Name
* Address Line 1
* Address Line 2
* City
* State
* Zip Code
* Phone Number
* Cell Phone Number

**Reservation**

* Reservation ID - PK
* Room Number - FK
* Restaurant ID - FK
* Number Of Guests
* Check-In Date
* Check-Out Date
* Number Of Nights Booked
* Number Of Meals Included

**Room**

* Room Number - PK
* Toiletry Inventory **(4 units)**
* Towel Inventory **(6 units)**
* Bedsheet Inventory **(2 units)**

**Restaurant**

* Meal ID - PK
* Meat Inventory **(4 units)**
* Vegetable Inventory **(4 units)**
* Drink Inventory **(4 units)**

**Purchase**

* Purchase ID - PK
* Room ID - FK
* Restaurant ID - FK
* Purchase Date
* Number Of Products
* Total Price

**Order Line**

* Order Line ID - PK
* Purchase ID - FK
* Product ID - FK

**Product**

* Product ID - PK
* Vendor ID - FK
* Product Name
* Product Price

**Vendor**

* Vendor ID - PK
* Vendor Name
* Address Line 1
* Address Line 2
* City
* State
* Zip Code
* Business Phone Number