

MARTHA'S 'MAZING CATERING

Background Information

Martha's 'Mazin Catering was founded three years ago by Martha Mazing. It began as a one-person operation, catering 2-3 small events per month. Initially, Martha relied on a few family members to provide her with the occasional assistance as needed however, since that time the business has grown to the point that it now employs several full-time and part-time employees. In addition, the number of clients, catered locations and recipes in the company's catalog has similarly increased.

Initially, Martha relied upon a spiral-bound notebook to record and track required client, location and recipe information. As the business grew, these records were migrated to an Excel spreadsheet. However, continued growth and non-standardized input rules has made the current system difficult to interact with and cumbersome to maintain. A well-designed database solution would allow staff to efficiently input and retrieve information about the company's clients, catered locations, menu construction, and event staffing requirements.

System Requirements

Problem –

The record-keeping system currently employed by the client is insufficient to meet their informational needs. Due to the increasing complexity and growth and of key components of the company's business such as client base, locations etc. staff are no longer able to input or retrieve data from the system in a timely manner. This is negatively impacting decision-making, staff efficiency and company financial resources.

People (Stakeholders) –

People who will benefit from the installation of a new record-keeping solution fall generally into two categories: Direct Stakeholders and Secondary Beneficiaries.

Direct Stakeholders: Included in this category are the managers and staff of the company. Both groups require, and would greatly benefit from, an efficient system for inputting and retrieving the information necessary to facilitate timely decision-making.

Secondary Beneficiaries: These groups of individuals, while not directly interacting with the record-keeping system, are none-the-less impacted by its degree of efficiency and would benefit from timely decision-making and information sharing. These groups include: clients, location managers and support staff, and vendors & purveyors.

Current Processes –

The process that is currently utilized by the client is outlined below:

1. The company is contacted by a potential client regarding a catering job.
2. Betty, the Event Planner (EP) obtains contact information from the client including: name, address, phone number, etc.
3. EP searches the "Client" spreadsheet to confirm whether the inquiry is from a previous client, and if so, that the contact info is correct.

4. EP confirms the "theme" for the event to be catered, (birthday, anniversary, retirement, etc.)
5. EP confirms if the client has a desired location.
6. If no location is identified by the client, EP will arrange for an appropriate venue.
7. EP will enter all applicable information into the "Event" spreadsheet including: Client Information, Location, Theme, Date, Time, Number of Guests and Specific Menu Requests.
8. EP researches records for previous catering events at the location to assist in staffing requirements for the event.
9. EP then makes a determination regarding the staff required for the event.
10. EP meets with Martha and Cherrie, the Food Coordinator (FC) to design the menu for the event.
11. Based on the event theme, EP develops a menu of items for each function.
12. EP presents the proposed menu to the client for approval.
13. Items are categorized as "Kosher", "Vegetarian", "Vegan" or "Non-Restricted".
14. EP calculates a price for each item based on the number of guests.
15. This pricing information is included in the "Event Detail Form.
16. Based on the approved menu, the FC develops supply list.
17. FC supervises kitchen staff in food preparation.

NOTE: Processes exterior to the scope of this project include financial and payroll functions.

Strengths –

Continuation of the system of Excel Spreadsheets as a record-keeping system has several strengths in its favor. The chief one being staff familiarity with the current system. Another benefit is the relatively low "learning curve" associated with navigating the spreadsheet environment. Excel has been a well-established consumer-level spreadsheet application for years, and many individuals are familiar with it. This has the additional benefit of lowering system training costs. Finally, remaining with the current system avoids the expense of developing and implementing a new system.

Weaknesses –

The primary weakness of the existing spreadsheet system is the increasing inability to obtain required information in a timely manner. This is not only financially expensive, but negatively impacts staff frustration and customer service. Additionally, the lack of inputting standards introduces input errors into the records and presents a significant challenge to data maintenance. Finally, the structure of the system utilizing three spreadsheets for "customers", "events" and "recipes" disregards other key elements such as "staff", "locations" & "themes". This makes coordination of this data difficult.

Objectives –

The primary objective of this proposed project is to provide the client with a responsive and scalable record-keeping solution that meets the informational requirements of the company. When implemented, the proposed system will allow users to efficiently input and access information regarding the comprehensive list of key elements including: customers, staff, events, locations, themes and recipes.

Benefits –

The key benefit that the proposed system will provide to the client is the ability to input data and retrieve information in a more efficient manner. This will lower the day-to-day operating expense of information management and utilization. Additionally, it will provide an important benefit of enhancing customer service by decreasing the timeframe required to research and develop a catering proposal and increasing customer goodwill. Finally, it will also provide a benefit in the areas of user satisfaction.

Alternative Solutions –

While the development and implementation of a well-designed database system is the most comprehensive solution to the current record-keeping situation currently faced by the client, a partial solution for some of the data retrieval problems might be a redesign of the existing spreadsheet system to include additional spreadsheets to record crucial elements not currently tracked such as “staff”, “location” and “themes”. An additional benefit could be realized with the development of data standards and improved user training regarding correct data input methods. *Although it should be noted that this latter recommendation will be an important element in either solution.*

Purpose & Scope –

The purpose of this project is to design and develop an automated data storage and informational retrieval system that will meet the needs of the client. This project will guide the process of identifying the informational needs of the client and distilling this information into a development plan for a database system appropriate for the client’s requirements.

The scope of this project will incorporate the comprehensive informational requirements of the event planning activities of the company including: client & location information, themes, staffing, menu planning and events.

Excluded from the scope of this project are the recipe details, financial records and processes of the client as well as personnel and payroll activities.

Information Requirements –

CUSTOMER –

- Customer ID
- Customer Name
- Customer Address
- Customer Phone
- Customer Contact
- Customer Email
- Customer Event
- Customer Event Location
- Customer Event Guest Number

THEME –

- Theme ID
- Theme Name
- Theme Description
- Theme Notes

EMPLOYEES –

- Employee ID
- Employee Number
- Employee Name
- Employee Job Title
- Employee Phone
- Employee Availability

EVENT –

- Event ID
- Event Date
- Event Time
- Event Location
- Event Address
- Event Contact
- Event Quote
- Event Guest Number

LOCATION –

- Location ID
- Location Name
- Location Address
- Location Contact
- Location Contact Phone
- Location Capacity
- Location Notes

MENU ITEM –

- Menu ID
- Menu Item Name
- Menu Item Cost
- Menu Item Category

Business Rules –

- Each Client can have only one Contact Information
- Each Contact Information can belong to only one Client
- Each Client can have more than one Event
- Each Event can have only one Client
- Each Event can have only one Location
- Each Location can have more than one Event
- Each Client can have Events at more than one Location
- Each Location can have more than one Logistic/Rule
- Each Event can have only one Menu
- Each Menu can have more than one Menu Item
- Each Menu Item can be on more than one Menu
- Each Menu Item can have more than one Ingredient
- Each Ingredient can be in more than one Menu Item
- Each Event can have only one Theme
- Each Event can have more than one Staff
- Each Staff can work more than one Event

Issues –

- Is the item, "Menu_Item_Cost" the production cost of the item per guest, or the fee charged for the item per guest?
- In what form, if any, does the client wish to record data regarding recipes and their component ingredients?
- Will recipes be stored in the database solely as "building blocks" for menus of events with various themes, or does the client anticipate incorporating recipes, ingredients, etc. into the database?

Assumptions –

- Menu_Item_Cost refers to the production cost of the item per guest, not the fee charged for the item.

Final Table List –

Table Name	Table Type	Table Description
Customer	Data	The consumers of the products and services provided by the client. Information pertaining to current, past and potential consumers allow for a better tailored and more efficient service to clients.
Event	Data	The instance of a specific service or set of services to a client at a unique time and location. Access to this information is essential to meet the needs of the client.
Location	Data	The spaces or areas within a facility available for the reservation for and the hosting of events. Information regarding the physical location, resources and limitations of a location assist in the selection of an appropriate event venue.
Menu_Item	Data	The culinary items that can be made available to a client at an event. Information regarding menu items allow for the construction of event menus appropriate to the event theme.
Employee	Data	The staffing resources available to facilitate events. Information regarding the skills and availability to staff allow for the efficient and appropriate staffing of events.
Theme	Validation	A listing of the variety of events that can be hosted, such as: Birthday, Anniversary, Retirement, etc. The ability to identify a theme allows for the coordination of event details appropriate for the event.
Event_Menu_Item	Linking	The culinary component(s) of the Menu assembled for the event. This information assists in the generation of other details of the event plan such as staffing, ordering, food preparation, etc.
Event_Employee	Linking	The listing of the staffing resources assigned or contracted to provide specific services at a specific event. This information is important to insure event staffing requirements in terms of skills and personnel are available for the event.

Assertions of Database Model –

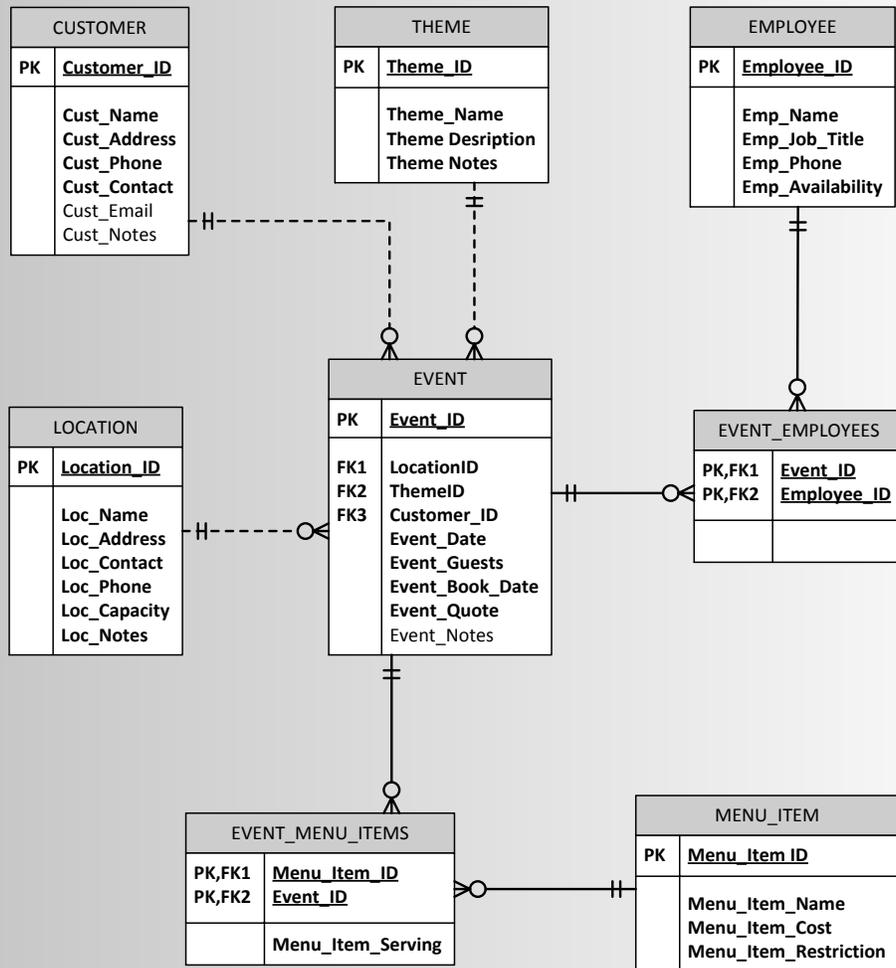
- A CUSTOMER may be related to zero or more EVENTS *and* an EVENT must be related to one and only one CUSTOMER
- A LOCATION may be related to zero or more EVENTS *and* an EVENT must be related to one and only one LOCATION
- A THEME may be related to zero or more EVENTS *and* an EVENT must be related to one and only one THEME
- An MENU_ITEM may be related to zero or more EVENT_MENU_ITEMS *and* an EVENT_MENU_ITEM must be related to one and only one MENU_ITEM
- An EVENT may be related to zero or more EVENT_MENU_ITEMS *and* an EVENT_MENU_ITEM must be related to one and only one EVENT
- An EVENT may be related to zero or more EVENT_EMPLOYEES *and* an EVENT_EMPLOYEE must be related to one and only one EVENT
- An EMPLOYEE may be related to zero or more EVENT_EMPLOYEES *and* an EVENT_EMPLOYEE must be related to one and only one EMPLOYEE

Entity Relationship Diagram (ERD) –

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Alan Gossett

October 20, 2012



Meta Data Dictionary –

ENTITY NAME	ATTRIBUTE NAME	Attribute DEFINITION	DOMAIN CONSTRAINTS	REFERENTIAL INTEGRITY CONSTRAINTS
CUSTOMER				Table Type: Data
	Customer_ID	Unique Identifier for each customer	System assigned Unique Numeric (10)	(PK) Primary Key
	Cust_Name	Customer's name	Required Non-unique Character (50)	
	Cust_Address	Customer's street address	Required Non-unique Character (100)	
	Cust_Phone	Customer's phone number	Required Unique Character (10) Mask XXX-XXX-XXXX	
	Cust_Contact	Customer's contact name	Required Non-unique Character (100) Default value="same"	
	Cust_Email	Customer's email address	Optional Unique Character (50) Default value="N/A"	
	Cust_Notes	Notes regarding customer event history, preferences, etc.	Optional Non-unique Text (2000) Default value="None"	
EMPLOYEE				Table Type: Data
	Employee_ID	Unique Identifier for each employee	System assigned Unique Numeric (5)	(PK) Primary Key
	Emp_Name	Employee's name	Required Non-unique Character (100)	
	Emp_Job_Title	Employee's Job Title	Required Non-unique Character (25)	
	Emp_Phone	Employee's phone	Required Non-unique Character (10) Mask XXX-XXX-XXXX	
	Emp_Availability	Employee's Schedule availability	Required Non-unique Text (200)	

ENTITY NAME	ATTRIBUTE NAME	Attribute DEFINITION	DOMAIN CONSTRAINTS	REFERENTIAL INTEGRITY CONSTRAINTS
EVENT				Table Type: Data
	Event_ID	Unique Identifier for each event	System assigned Unique Numeric (10)	(PK) Primary Key
	Location_ID	The Location ID Number	Required Non-unique (FK) Foreign Key (LOCATION)	An Event record cannot exist without a Location record
	Customer_ID	The Customer ID Number	Required Non-unique (FK) Foreign Key (CUSTOMER)	An Event record cannot exist without a Customer record
	Theme_ID	The Theme ID Number	Required Non-unique (FK) Foreign Key (THEME)	An Event record cannot exist without a Theme record
	Event_Date	Date of event	Required Non-unique Character (6) Mask XX/XX/XX	
	Event_Guests	Number of event guests	Required Non-unique Character (5)	
	Event_Book_Date	Date of event booking	Required Non-unique Character (6) Mask XX/XX/XX	
	Event_Quote	Quoted fee for event	Required Non-unique Currency (8) Mask \$XXX,XXX.XX Default = "\$0.00"	
	Event_Notes	Notes regarding various details of event	Optional Non-unique Text (2000) Default value="None"	
EVENT_EMPLOYEES				Table Type: Linking
	Event_ID	The Event ID Number	Required Non-unique (FK) Foreign Key (EVENT)	(PK) Primary Key (CPK) Composite Key. An Event_Employee record cannot exist without an Event record
	Employee_ID	The Employee ID Number	Required Non-unique (FK) Foreign Key (EMPLOYEE)	(PK) Primary Key (CPK) Composite Key. An Event_Employee record cannot exist without an Employee record

ENTITY NAME	ATTRIBUTE NAME	Attribute DEFINITION	DOMAIN CONSTRAINTS	REFERENTIAL INTEGRITY CONSTRAINTS
EVENT_MENU_ITEMS				Table Type: Linking
	Menu_Item_ID	The Menu Item ID Number	Required Non-unique (FK) Foreign Key (MENU_ITEM)	(PK) Primary Key (CPK) Composite Key. An Event_Menu_Item record cannot exist without an Menu_Item record
	Event_ID	The Event ID Number	Required Non-unique (FK) Foreign Key (EVENT)	(PK) Primary Key (CPK) Composite Key. An Event_Menu_Item record cannot exist without an Event record
	Menu_Item_Serving	Number of Menu Item servings to be prepared	Required Non-unique Character (10)	
LOCATION				Table Type: Data
	Location_ID	Unique Identifier for each location	System assigned Unique Numeric (8)	(PK) Primary Key
	Loc_Name	Location name	Required Unique Character (50)	
	Loc_Address	Location street address	Required Non-unique Character (100)	
	Loc_Contact	Location contact name	Required Non-unique Character (50)	
	Loc_Phone	Location phone number	Required Unique Character (10) Mask XXX-XXX-XXXX	
	Loc_Capacity	Occupancy capacity of location	Required Non-unique Character (10)	
	Loc_Notes	Notes regarding various location details	Optional Non-unique Text (2000) Default value="None"	
MENU_ITEM				Table Type: Data
	Menu_Item_ID	Unique Identifier for each menu item	System assigned Unique Numeric (10)	(PK) Primary Key
	Menu_Item_Name	Name of the menu item	Required Non-unique Character (50)	
	Menu_Item_Cost	The production cost of a menu item, per guest	Required Non-unique Currency (8) Mask \$XXX,XXX.XX	
	Menu_Item_Restriction	Identifies menu items suitable for guests with restricted dietary requirements	Required Character (10) Valid values = "Vegetarian", "Vegan", "Kosher" & default value "Non-Restricted"	

ENTITY NAME	ATTRIBUTE NAME	Attribute DEFINITION	DOMAIN CONSTRAINTS	REFERENTIAL INTEGRITY CONSTRAINTS
THEME		Table Type: Validation		
	Theme_ID	Unique Identifier for each theme	System assigned Unique Numeric (5)	(PK) Primary Key
	Theme_Name	Name of the theme	Required Non-unique Character (25)	
	Theme_Description	A description of the theme	Required Non-unique Character (250)	
	Theme_Notes	Notes regarding various theme details	Optional Non-unique Text (2000) Default value="None"	