Outline of Proposal by Dharmarlou Bowen

The context of the website is focused on providing multiuse functionality that enables customers as well as tools to the staff at a 'Cocktail Bar'. For customers it would provide them with information about the types of events, cocktails and services provided at the bar. For upper management (such as managers) it also provides a portal to observe, amend and modify their staff rotas.

The information you will find below discusses the ERM (Entity Relationship Modelling for the website). The key objectives of the ERM for the Bar are:

- Ensuring all entities are correct and relevant to the Bar
- Attributes should be relevant to the associated entity
- Relationships should be linked to the correct entities

The categories of entities relevant to the Bar are Staff/Customers/Products(Menu)
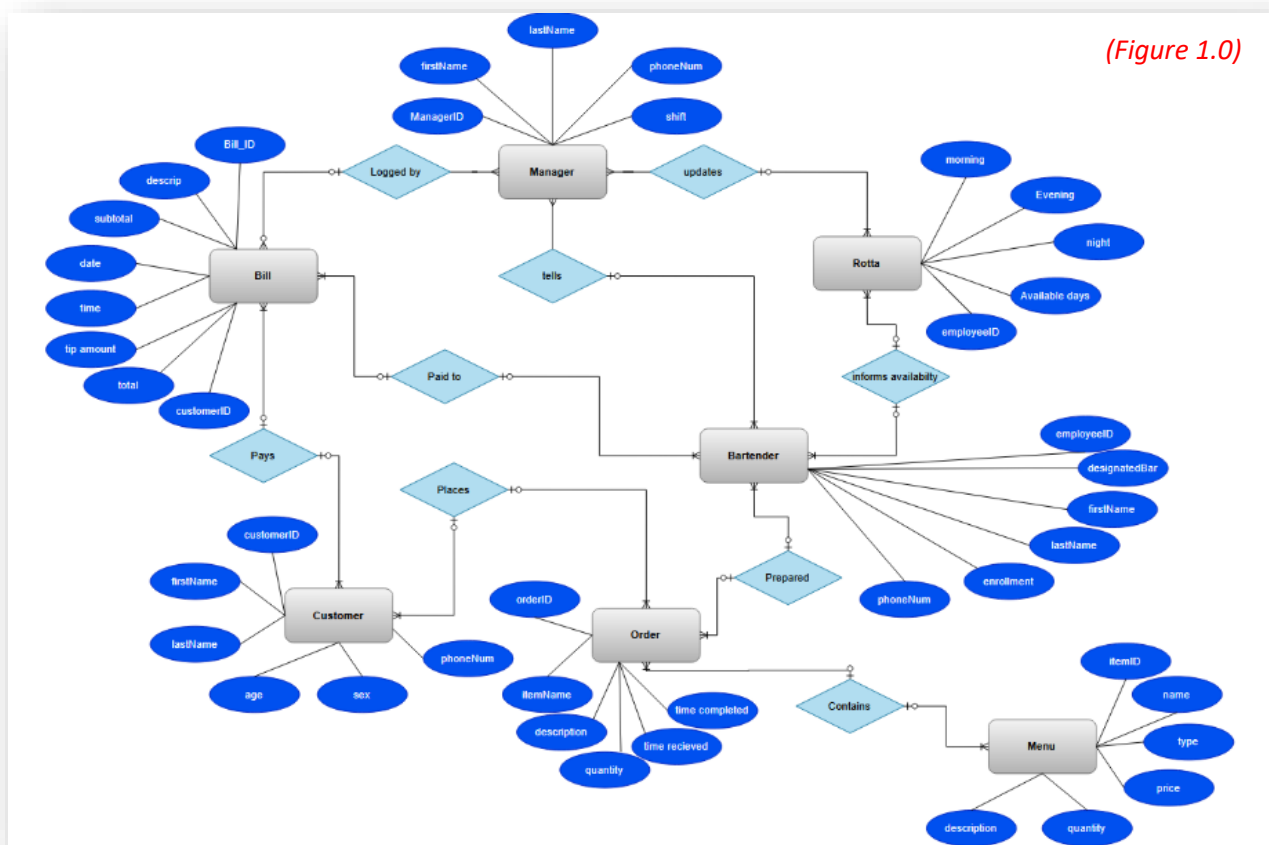
Entities
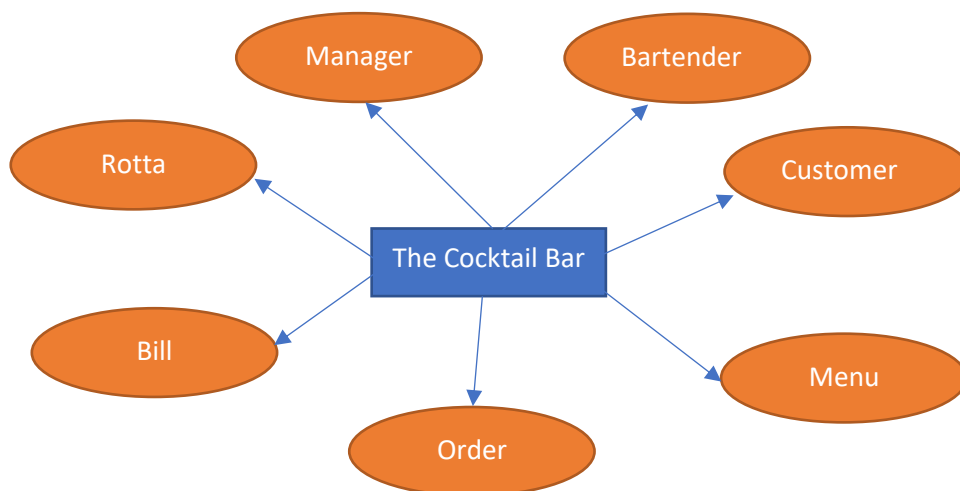
Relevancy of each Entity (7 in Total):

- Managers (In charge of staff, manages rotta and logs bills)
- Bartenders (Interact with customers, managers and prepares orders)
- Customers (make purchases from bartenders)
- Bill (paid by customer to bartender)
- Order(to be prepared by bartender)
- Menu (Available Cocktails)
- Rotta (Timetable for Staff)

7 entities are relevant to having the database function for the website. There were additional proposals for other entities, but they would have made the database to complex as they were deemed unnecessary. Each of the entities either represents a Individual, an action or a form of audit.

(Figure 1.0)

Attributes & Relationships

Entities	Attributes	Cardinality Ratios
Manager	• ManagerID • firstName • lastName • shift(morn, evening, night) • phoneNum	M:M with Rotas. Multiple managers and manage multiple rota records for amendment.
Bartender	• EmployeeID • firstName • lastName • Enrollment (part-time, full-time, contract) • phoneNum • designatedBar (1 or 2)	1:1 with rotas. Each employee/bartender has one record in the rotas representing their weekly shifts.

Customer	• customerID • firstName • lastName • age • sex • phoneNum	1:M with Order. A Customer can make multiple orders which is in association to another relationship. 1:M bills that would be paid after orders are confirmed.
Bill	• billID • description • subtotal • date • time • tip amount • total • customerID	1:1 with customers. This is because when each bill is paid for it has only one customer performing the payment.
Order	• orderNum • itemName • description • Quantity • Time received • Time Completed	1:M with Menu. This is because an order can contain multiple items from the menu in varying quantities.
Menu	• ItemID • Name • Type (Rum, Vodka, Gin, Non-Alcoholic) • Price • Quantity (that can be made) • Description (Covers ingredients and recipes)	M:1 with order. This is because a multiple item can be put on a single order.
Rotta	• Morning • Evening • Night • Available days • EmployeeID	1:1 with bartenders. This is because each bartender on as 1 record assigned to them representing a week's schedule,