

FINAL PROJECT REPORT  
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Title: Buyers guide for spas

- Abstract: Consumers looking to purchase an outdoor spa pool may struggle with:
  1. **Information Overload:** The abundance of brands, models, and features makes it challenging to differentiate between options and identify what truly matters.
  2. **Lack of Expertise:** Many buyers lack the technical knowledge to understand the pros and cons of different materials, filtration systems, heating options, and other important features.
  3. **Budget Constraints:** Determining the best value for money, considering both initial costs and long-term maintenance expenses, can be difficult.
  4. **Unclear Needs:** Buyers may not fully understand their own needs, such as space requirements, energy efficiency, or desired features, leading to suboptimal purchasing decisions.
  5. **Fear of Buyer's Remorse:** The fear of making a costly mistake can paralyze decision-making or lead to the selection of a product that doesn't meet the buyer's expectations.

## Business rules and the list of Entities, Attributes and Relationship

### Manufacturers:

- Each manufacturer is identified by a unique ManufacturerCode.
- A manufacturer can produce one or more brands, but each brand is associated with only one manufacturer.

### Brands:

- Each brand is identified by a unique BrandName.
- Each brand belongs to a specific manufacturer, indicated by the ManufacturerCode.
- A brand can have multiple models, but each model is associated with only one brand.

### Models:

- Each model is identified by a unique ModelNumber.
- Each model is associated with one brand, indicated by the BrandName.
- The detailed specifications of each model (e.g., number of jets, motors, price) must be stored in the system.

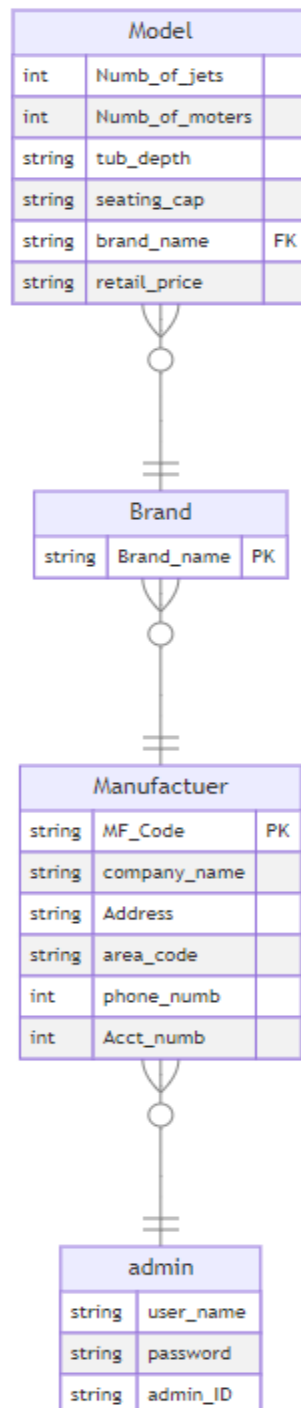
# Data Dictionary

Table name	ATTRIBUTE NAME	CONTENTS	TYPE	FORMAT	RANGE	REQUIRED	PK OR FK	FK REFERENCED TABLE
MODEL	Numb_of_jets	Number of Jets	int	XX	1 to 15	Y		
	Numb_of_motors	Number of motors	int	XX	1 to 10	Y		
	tub_depth	Depth of the tub	string	XX inches	1in to 48in	Y		
	seating_cap	How many people can sit in tub	string	X	1-8 people	Y		
	brand_name	Brand name of the tub	string	XXXXXXXX	NA	Y	FK	
	retail_price	Price of the tub	string	\$XXXXXX	\$5,000-\$30,000	Y		
BRAND	Brand_name	Brand name of the tub						
	brand_lvl	Brand level						
	MF_Code	Manufacturer code			Letters and Numbers			

# Entity Relationship model

## Hot Water Start-Up

HW ERD



# Relational Database Model

