Sandy Bartending Management System: Milestone 1

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CSC 461: Database Systems

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September 13, 2021

Derek Caramella[1], Lisa Pink[2], & Tapan Pradyot[3] (Team 19) seek to create a bartending management system. *Bar Rescue*, a reality television show hosted by Jon Taffer, exhibits a vital need for bartending empirical information. Additionally, the recent advents of bartending technology, such as Bruno & Somabar, exhibit technology adoption within the industry. Team 19 strives to equip business owners, venture capitalist, & stakeholders with information that increases optimal decision making.

Supply chain & product portfolio management are integral to catalyze growth & ensure sustainability. Supply chain management is the workflow converting raw materials into the final, deliverable product. A plethora of complications can muddle supply chain processes, such as inaccurate inventory cycle identification, imprecise sale forecasts, or inflexible labor provisions. Twenty-five percent of the marketing matrix[4] is product management, inappropriate product offerings may be a corporation's demise. Team 19's management system, *Sandy*, resolves supply chain & product portfolio disruptions by pragmatically organizing & displaying key performance indicators. *Sandy* delivers data visualizations that enable stakeholders to view revenue contributions across cocktails & bartenders. *Sandy* retrieves data through a variety of Point-of-Sale (POS) systems; thus, bars/pubs may seamlessly adopt *Sandy* into its information system catalog.

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[4] Marketing Matrix: Product, Price, Place, & Promotion

Sandy contains five tables: *Orderable_items*, *Item_supplies*, *Bartenders*, *Completed_Orders*, & *Orders*; the figure to the right exhibits *Sandy's* preliminary data model. Moreover, attribute data types are listed below.

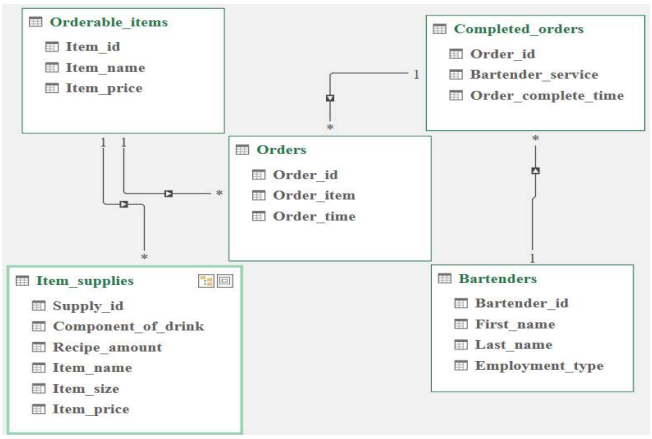
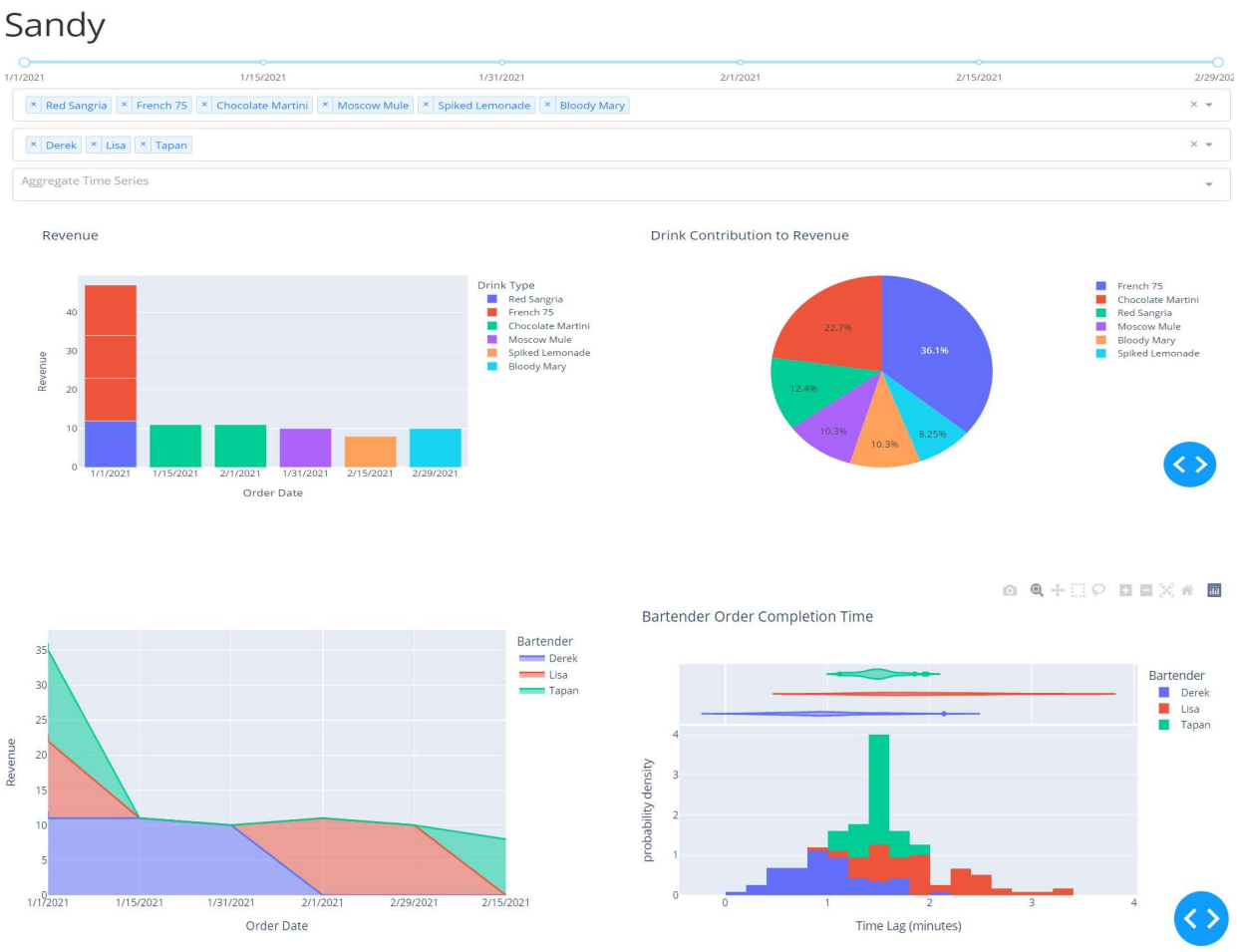


Table	Attribute	Description	Data Type
Orderable_items	Item_id	Primary key	int
Orderable_items	Item_name	Finished item title	varchar(100)
Orderable_items	Item_price	Finished item price	decimal(6,2)
Item_supplies	Supply_id	Primary key	int
Item_supplies	Component_of_drink	Finished drink name	varchar(100)
Item_supplies	Recipe_amount	Raw drink (oz.) necessary	decimal(4,1)
Item_supplies	Item_name	Raw drink into finished drink	varchar(100)
Item_supplies	Item_size	Raw drink purchase size (oz.)	decimal(5,1)
Item_supplies	Item_price	Raw drink purchase size ($)	decimal(6,2)
Completed_orders	Order_id	Primary key	int
Completed_orders	Bartender_service	Bartender id completed order	smallint
Completed_orders	Order_complete_time	Completed Order Time	datetime
Bartenders	Bartender_id	Primary key	smallint
Bartenders	First_name	Bartender's first name	varchar(100)
Bartenders	Last_name	Bartender's last name	varchar(100)
Bartenders	Employment_type	Full Time/Part Time	char(9)
Orders	Order_id	Primary key	int
Orders	Order_item	Order finished item	varchar(100)
Orders	Order_time	Order time	datetime

Sandy is constructed within the Python computer programming language. Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Python supports modules and packages, which encourages program modularity & code reuse. Additionally, Team 19 will utilize the mysql.connector module to create a connection to the MySQL server & execute MySQL statements. Moreover, Team 19 will utilize the Plotly Dash

module to fabricate a web-interface. Plotly is written on top of React.js that enables seamless cross-platform & mobile executable. Below is *Sandy's* preliminary overview.



The user may filter cocktails & bartenders to view marginal data within the database. Moreover, the user may aggregate data into hourly, daily, monthly, & quarterly based. Furthermore, the user may filter the time-series to view specific operational records. Lastly, the user may click on the legends to view specific cross sections within the database without slicing the other figures. *Sandy's* goal is to provide holistic empirical evidence to increase objective decision making.

Team 19 will artificially construct the data records to exhibit *Sandy's* capabilities. Team 19 will utilize Gaussian distributions to generate order & completion times; moreover, Team 19 will represent market priced liquor within the database.

When using *Sandy*, shirts & shoes are optional.