**Sandy Bartending Management System: Milestone 1**

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Derek Caramella[[1]](#footnote-1), Lisa Pink[[2]](#footnote-2), & Tapan Pradyot[[3]](#footnote-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](https://www.makrshakr.com/products/) & [Somabar](https://www.somabar.com/), 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]](#footnote-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.

|  |  |  |  |
| --- | --- | --- | --- |
| 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 |

Diagram

Description automatically generated *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.

*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.

Graphical user interface, chart

Description automatically generated

Graphical user interface, application

Description automatically generated

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.

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4. Marketing Matrix: Product, Price, Place, & Promotion [↑](#footnote-ref-4)