**Smart Reservation Table Proposal Document**

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**What is Smart Reservation Table?**

Smart Reservation Table is a management system that connects restaurants and customers. The system not only allows the customers to see what date and time they can book, but also provides notification so that the customers do not forget their reservations.

**What we are doing?**

1. Creating database for restaurant portal access, account and reservation management, login, signup, and account details.
2. Providing a map showing how to get to a restaurant from the current location.
3. Providing availability of tables and times to customers in real time.

**Time Estimation?**  
Fall semester September 4th - December 10th, 2019.

**Features of the Smart Reservation Table App**

**MANAGERS LOGIN**

1. Login and register page.
2. Loading screen.
3. Database setup and connection function.
4. Data display screen.
5. Push notification.
6. Customer history.
7. Message log.
8. Customer reviews and ratings.
9. Cancelling reservations
10. Waiter call.

**CUSTOMERS LOGIN**

1. Login and register page.
2. Loading screen.
3. Database setup and connection function.
4. Data display screen.
5. Setting screen and menu bar.
6. Help screen and “About” screen.

**Additional unique features**

1. Waiter call.
2. Quick order (Order the same as the previous one).
3. Promotional and loyalty programs (Loyal customers can sign up for unique accounts).
4. Customer support page.
5. Push notification.
6. Customer history.
7. Message log.
8. Customer reviews and ratings.
9. Reservation chart in a tabular format.
10. Restaurant contact info.
11. Special offers, combos and dining options, etc.

**The system monitors each table, using sensors to send automated data feedback to the restaurant manager.**

**More specifics of Hardware and Sensor implementation (Additional Information)**

**Sensors for consideration**

* **LEDS**
* **Pressure sensor (possible) - detect if persons are occupying a table or a chair**
* **GPS sensor (token taken to the table by the client upon confirming the reservation at a restaurant)**
* **Weight (piezoelectric sensors) or h20 photoelectric sensor - a sensor for detecting if a customer's drink or water container needs to be refilled. (QS30 H20 photoelectric sensor).**
* **Ultrasonic sensors HCSR04 - requires an ADC calibrated exclusion zone (maybe everything within 15 inches around a table). Interruptions after specific time of an object being there determines voltage signals**

**Validation sensors**

* **People counter - Installed at entrance and over each table**
* **Camera looking at each table**

**Similar software/applications**

1. **optimum control**
2. **lightspeed**
3. **TouchBistro**
4. **Toast POS**
5. **Lavu**