**Software Requirements Specification**

**Functional Requirements**

1. **Membership Module**
   1. The restaurant website should allow the users to **register as member online**.
   2. The online registration should allow the users to **fill in their personal information** which are member’s name, birthday, gender, identification card number, phone number, email address and home address.
   3. The restaurant website should **send a confirmation email** to the users to confirm their registration.
   4. The restaurant website should allow the users to **view their details online**.
   5. The restaurant website should allow the users to **change or update their details online**.
   6. The restaurant website should allow the members to **earn points on every transaction made**.
   7. The restaurant website should let the members to **use their membership points earned to redeem food** or enjoy cash back upon each transaction.
2. **Food Delivery Module**
   1. The restaurant website should allow the customers to **view the menu** where the menu context includes name of food items, price of food items, images of food items, and different categories of food displayed on a menu bar.
   2. The restaurant website should allow the customers to **make online order** by adding the food to their order list, add the food quantity, and deduct the food quantity.
   3. The restaurant website should **prompt error messages** to the customers when the food selected by the customers is out of stock.
   4. The restaurant website should allow customers to **review the summary of the food** **ordered** which includes the name of the food ordered, quantity of each food item, price of each food item and total price before proceed to delivery and payment.
   5. The restaurant website should allow the customers to **confirm their order** where they can change or cancel their order before payment.
   6. The restaurant website should prompt the customer to **enter delivery details** which is the customer’s address and customer’s phone number.
   7. The restaurant website should prompt the customer to **choose the payment method** which is payment by cash or credit card.
   8. If the customer chooses to pay by credit card, the restaurant system should allow the customers to **enter the payment details** which are credit card number, bank account name and Personal Access Code (PAC) code.
   9. The restaurant website should **display estimated time** for the customer’s meal delivery.
3. **Reservation Module**
   1. The restaurant website should allow the customers to **fill in the reservation form** containing the customer’s booking date, booking time, number of guest, name, contact number and remarks to reserve a table.
   2. The restaurant website should allow the customers to **update their booking details** which is the date and time 1 day before the previously reserved date.
   3. The restaurant website should allow the customers to **cancel their booking** 1 day before the previously reserved date.
   4. The restaurant website should **display the available tables** to the customers which then the customers may select their desired table to dine in.
4. **Promotion Module**
   1. The restaurant website should allow the customers to **search a specific restaurant promotion** by displaying accurate and up-to-date promotion information to them.
   2. The restaurant website should **display all the available restaurant promotion** to the customers.
   3. The restaurant website should be able to **keep track of special events** every year which are customers’ birthdays, Chinese New Year, Deepavali, Hari Raya, Mother’s Day, Father’s Day, Easter Day, and Christmas Day.
   4. The restaurant website should automatically **send promotion details** regarding special events to the customers’ email addresses.
   5. The restaurant website should let the restaurant manager to **create new promotion details** whenever there is new promotion record.
   6. The restaurant website should allow the restaurant manager to **update the promotion details** when there are changes needed to be made.
   7. The restaurant website should allow the restaurant manager to **delete the promotion record** when the manager decides not to use that particular promotion anymore.
   8. The restaurant website should **validate the promotion details** provided by the restaurant manager when he creates or updates the promotion record by checking the input.
   9. If the input entered by the manager is invalid, the website should **prompt error messages**.

**Non-Functional Requirements**

**Membership Module**

**Availability**

* 1. The overall uptime for the system is estimated to be at 99.943%.
  2. The service level agreement of 99.943% uptime gives following periods of potential downtime which is roughly 4 hours 59 minutes 47.5 seconds annually.
  3. In the event of system failure, the system will reboot itself within a minute.
  4. System downtime for maintenance and backup will not exceed 10 minutes each time.
  5. Cloudflare is installed to mitigate Distributed Denial of Service attack.

**Food Delivery Module**

**Usability**

**2.1** The quantity of food items should update automatically within 1 second.

**2.2** The error message should be prompted to the customer when the food is out of stock.

**Reservation Module**

**Fault Tolerant**

1. For the reservation module, the restaurant website should be able to sustain heavy traffic as well as able to recover quickly from system failures. For instance, during lunch and dinner hours (peak hours), the system should only have a minimum downtime of 0.9945% per year (maximum 2 days downtime). Other than that, the system should have relevant backups when the website crashed or is down. Thus, when the website is down, the system should be able to restore within 1 day through the backed up data.

**Promotion Module**

**Efficiency**

1. Relevant promotion should be up or valid within 1 second when the time has reached the promotion period.