# Voting system for deciding where to have lunch

## Design Document

Author: Evgeny Lyulkov

Revision 1.0 Dec.14 2015

### Features, business rules and implementation layers

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| N | Feature as per customer  request | Feature specification  (if differs from customer request) | Implementation layer | Remarks |
|  | 2 types of users: admin and regular users | 2 user roles: admins and regular users | SQL DB access control |  |
|  | Admin can input a restaurant and it's lunch menu of the day (2-5 items usually, just a dish name and price) | Dedicated UI for admins to manage restaurants, dishes and menus | Full stack |  |
|  | Menu changes each day (admins do the updates) | Menu update history (per day).  Menu update action must be transactional to prevent voting for incomplete menus being currently changed. | SQL DB | That's a superset for customer's request (to integrate new functionality in the future if requested) |
|  | Users can vote on which restaurant they want to have lunch at | There is a softcodely predefined range of user votes applicable to menu versions.  Every vote applies to the most recent menu version dated earlier than vote date. | Full Stack | Users vote for menu versions, not for restaurants either not for separate dishes. |
|  | Only one vote counted per user | Only one vote counted per user per menu version. A user can request voting summary for present menus only as well as retrospectively for menu history. | SQL DB |  |
|  | If user votes again the same day:  - If it is before 11:00 we assume that he changed his mind.  - If it is after 11:00 then it is too late, vote can't be changed |  | SQL DB (BEFORE UPDATE trigger). | First release may use hardcoded 11am cut-off time. |
|  |  | Reporting: Reporting functionality and corresponding front-ends are manageable by content of Report table containing prepared reports. Back-end API allows execute prepared and arbitrary reports as well with results in JSON format. | SQL DB: updateable Report table containing prepared SQL queries | A list of cooked reports see below. |

### Reporting

* Voting grade scale
* Restaurants (retrospective voting review)
* Restaurants (voting review for present menu)
* Visitors
* Present day menu
* Detailed voting information
* Present day menu votes
* Restaurants ordered by sum od visitor's votes
* Restaurants ordered by visitor's votes for present day menu
* Restaurants ordered by sum of visitor's votes weighted by average vote of the same visitor
* ... more reports can be added to UI by editing Report table.