**Software Design and Architecture - Homework 1**

**ReserveIT - Web application for making reservations**

**Produced by: Support Group**

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**Description:**

ReserveIT is easy to use, time-saving and a web-based table reservation application system. It includes powerful table management and a guest database which helps with day to day operations. The application system enables easy floor plan setup and control over party sizes and availability directly through the app, and also comes with an easy to install widget that shows real time table availability for your guests to book directly from your website or social media profiles. You can send regular booking confirmations and text message reminders to all customers with just one click. From your waitlist, you can also send a “table ready” notification to customers waiting for a table. Sending text message confirmations to your guests is a great way to significantly decrease the number of no-shows, and to provide customers with booking reminders. ReserveIT offers a application system that is the easiest way to take online reservations without the headache of expensive software and complicated pricing structures. Simply put, ReserveIT puts you in control of the data and the reservation experience, allowing you to build direct relationships with your guests.

**Functional Requirements**

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| **Priority Level** | **Description** |
| **Priority 1** | **Essential functionality** |
| **Priority 2** | **Desirable functionality** |
| **Priority 3** | **Extra Features** |

1. The application system shall have the ability to display the available tables. (Priority 1)
2. The application system shall only have one user per account. (Priority 1)
3. This application system shall be accessible on mobile devices (iOS, Android, Windows). (Priority 1)
4. This application system shall be accessible on Google Chrome, Firefox, Safari, Opera and Internet explorer. (Priority 1)
5. The application system shall allow each staff user to login to the system by using their ID. (Priority 1)
6. The application system shall display a text field for First name, Last name and telephone number.  (Priority 1)
7. The application system shall provide a list of customers that have reserved a table. (Priority 1)
8. The application system supports making reservations and the ability to modify/cancel them. (Priority 1)
9. The application system shall provide a confirmation message to the customer from the staff regarding their reservation. (Priority 1)
10. The application system shall allow users to reserve a table by pressing the reserve button.
11. The application system shall allow users to make a reservation through this application any time and from anywhere.  (Priority 1)
12. The application system shall allow when installing the new version to leave all the contents of the database and all the personal settings unchanged. (Priority 1)
13. The application system offers a help option when pressing the Help button, in the upper right corner. (Priority 2)
14. When a customer searches for restaurants, the search result shall contain full information (Address, Ratings, and Price) as well as the reviews given by the previous customers. (Priority 2)
15. The application system shall allow users who are not registered on to the application system to see how many tables are free, but reservation option will not be allowed.  (Priority 2)
16. This application system shall have an option for selecting the number of people. (Priority 2)
17. This application system shall allow customers to check their reservation status either from their account or through the reservation id. (Priority 2)
18. The application system offers a display of the names of those who have booked a table to the staff. (Priority 2)
19. The application system allows you to select a language from the offered options (Macedonian, Albanian, English) in the upper right corner of the screen. (Priority 3)

**Non-Functional Requirements**

1. This application shall be easy to use.
2. The application system shall refresh the tables every 5 seconds.
3. Accessible by management staﬀ and users.
4. Less than 6 seconds response time.
5. The application shall be capable of supporting 500 customers at the same time.
6. This application shall be supported by windows, mac, android users, linux and iOS users.
7. The application shall have the ability to interact with the Excel database.
8. Application system should use captcha and encryption in order to avoid bots from making reservations.
9. Search application system should fetch results within the acceptable time limit.
10. For this security we are using HTTPS (Hypertext Transfer Protocol Secure) which is an internet communication protocol that protects the integrity and confidentiality of data between the user's computer and the site.
11. The ability to resist unauthorized attempts at usage by providing service to legitimate users while under denial of service attack (resistance to DoS attacks).