Bilkent University

Computer Science Department

**Senior Design Project**

*Hygiene Score*

Project Specifications

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# 1. Introduction

The recent advancements in technologies has enabled people to reach information with ease. With increasing accessibility to the web and quickness of mobile devices, information about anything is in people’s hands in no time. People search for the items that they wish to buy, the movies they want to see and where they want to eat before anything else. Mobile applications and websites are introduced to reach people’s demands for this information annually. In today’s world, people do not wish to have a go at it, but they want to know every detail beforehand.

Restaurants and other food establishments are the most searched industry on the web. A research done in 2013 indicates that 81 percent of consumers search the restaurant they wish to eat before going there. Today there are many applications and websites on the market that provide information and even other customers[[1]](#footnote-1) experiences about restaurants. These applications focus on the tastiness of the food, fastness of the service or the attitude of the serving personnel. However, the customers have no information about the background of these establishments. They do not have access to infrastructural features such as the hygiene of the cooking place, hygiene of the personnel or about the quality of the food used. The recent trend among the people is the priority given to hygiene and people want transparency regarding this aspect. There is currently no application in the market that can deliver information about these infrastructural features of restaurants. Moreover, customers have no visible access to the evaluations of restaurants  conducted by professional food inspectors. Hygiene Score is an application that wishes to meet people’s demand for more information and transparency by providing enlightenment about unseen feature of restaurants supervised by professional inspectors.

On an owner’s point of view, they are investing grave amount of money to advertisements to attract customers to their establishments. With the recent increase of demand for transparency, being undisguised is a form of great advertisement. This application is a way for them to open their doors and show their infrastructure in a single environment and promote their restaurant in the most noble of ways.

# 1.1. Description

Hygiene Score is a web-based and android based application that allows the users who eat out to be informed on the interior structure of a restaurant, get professional education and restaurant owners to be aware of what measures to take for making the restaurant fall in the line with hygiene rules and to advertise. The application will be available for food establishments such as restaurants, cafes, diners, bistros, etc. Hygiene Score enables the users to be aware of infrastructural features of these establishments. Some of these infrastructural features are hygiene standards, quality of service and food quality.

The restaurants will be graded according to the point out of 5 given to them by the user. The majority of the grade will be given by the inspector and the customers will also contribute to this grade according to their experience. Their contribution to the grade will be minor than the inspector’s grade. The users will be able to write comments about their experience in the restaurant. These given grades will be stored and a graph will show how the restaurant’s grade has changed in a certain time interval. The data from the graph will give the users and customers a graphical view of how the restaurant is doing.

The application will offer a form of education to the users on the aspects of restaurant hygiene. To achieve this, the system will offer modules separately prepared for restaurant customers and owners by a food inspector. Customers who have taken this module and passed the quiz in the end will be allowed to get a higher contribution in the overall score of a restaurant and will be awarded if they achieve to be in the active's board. The modules and training will be through videos. The content of the training will be decided by the inspector.

The users will be able to search the existing restaurants through a search engine. The restaurant will be categorized upon their grades and cuisine that they offer. Each restaurant will have a page that will give basic information about it. Such as the location, phone number, cuisine and photos. The page will also have the grade of the restaurant as well as the comments made by the customers.

**1.2. Constraints**

**1.2.1. Economic Constraints**

* The application will be free to download from the appstore and free to use from internet browsers.
* Domain name for the website will be bought and the databases needed for the website and the app will be purchased. The database will be used to contain information about the restaurants, fast food chains etc. and the users of the application.
* The application will also contain fees for the restaurant customers to get access to hygiene control education modules, restaurant owners to earn a certification badge after following a personnel education and hygiene education module.

## 1.2.2. Social Constraints

* The users have to create their own accounts or login via Facebook to use the application and the website.
* Other than rating the restaurant in specific , the users will be able to leave comments about the restaurant and it might have a difference in impact according to their account’s history.

## 1.2.3. Implementation Constraints

* The language of the android application will be Java.
* The website will be developed with HTML5, CSS and JavaScript.

## 1.2.4. Language Constraints

* The language of the application of the website will be available both in English and Turkish.

**1.2.5. Sustainability Constraints**

* The growth of Hygiene Score will be in parallel with the size of the data it stores.
* Hygiene Score will be updated in every once in awhile.
* Hygiene Score stores both professional and unprofessional evaluation from the previous moths’ inspections on the food establishments therefore, so that the user can see the particular establishment’s improvement or descension.

## 1.2.6. Security Constraints

* The data of the restaurants and the users that has been collected for Hygiene Score will be kept in the database system and they will be backed up.
* The data that has been given by the user during the registration such as name, password and email address will be maintained safe and they will not be shared with anyone.

## 1.2.7. Technical Constraints

* Since Hygiene Score is a web based program it will work on devices that has access to the internet.
* The application will work on the mobile devices that has Android Operating System.

## 1.2.8. Timing Constraints

* The project will be completed both on the implementation and testing aspects by May 2017.

# 1.3. Professional and Ethical Issues

As we work on our project, every member of the group will be assigned with the equal amount of work and the distribution will be done fairly. To be able to discuss the improvement of the project or the issues about it, we will be arranging a meeting every week. While arranging the meeting, dates and time we will be careful about it is the most suitable time for every group member in order to keep every member attentive to the process.

Hygiene Score’s registration system requires user to enter personal information about themselves such as name, email and password. The information of the users will be maintained safely and they will not be shared with anyone. Any kind of untrustworthy comments for any of the establishments will be removed and the user will be warned, if done repeatedly, the information about that particular user will be removed. The evaluation provided by the professional inspector will not be biased. It will depend only on the professional constraints that the inspector has to abide to.

# 1.4. Requirements

## 1.4.1.  Functional Requirements for the System

* Application should have relationship with external interfaces to be user-friendly

system that can be learned and used easily by users.

* Web site should show an individual home page for every food establishment.
* The shown data and statistical graph should be accurate.
* The application will be accessible via mobile markets and web.
* The application will store information about the food establishments and show them on their specific home pages.
* Hygiene Score will categorize the food establishments into different categories.
* Application will have a page that recommends a weekly high rated establishment from the database according to the grades of them.

## 1.4.2. Functional Requirements for the Users

### **1.4.2.1. Customers**

* Customers can search the food establishments regarding their category.
* Customers shall be allowed to view all of the home pages of the food establishments.
* Customers that are interested, can get beginner’s education via virtual education videos about how to inspect the hygiene level of a place.
* Customers shall give marks to the food establishments.
* The application will provide a graphical representation of the grades of the specific food establishment that are gained through the inspections, to the customers.
* Customers shall comment to the food establishments.

### **1.4.2.2. Business Owners**

* Business Owners who have requested the system to provide their workers some training on hygiene shall be allowed to get the education for their workers via the virtual education videos.
* Business Owners can set up their home pages.
* Business Owners can put pictures of their establishment to their home page.

### **1.4.2.3. Inspector**

* Hygiene Score will provide a evaluation interface for the inspectors that afterwards will be recorded in a database.
* Inspectors would be the only users that are allowed to use the evaluation interface.

## 1.4.3. Nonfunctional Requirements

### **1.4.3.1. User-friendly Interface**

Hygiene Score’s target audience is generally the new millennial generation, although the user’s age could increase in daily life. As younger generation is our target audience, our application should have a user friendly interface otherwise no matter how great our application is, people will not get used to using neither our application nor our web site.

### **1.4.3.2. Maintainability**

For our application, Hygiene Score, the maintainability would have  both the back end and the application client on the market works as intended. For the mobile application of Hygiene Score maintaining the latter one will be through the updates through Android Play Store. The former one is related to the server side of the system. Maintaining server side operations will be our responsibility as long as the application is being used.

### **1.4.3.3. Platform Compatibility**

Hygiene Score will be developed as an application that is compatible with multiple platforms. The users will be able to use it as a web-application on Windows and also as a mobile application on Android phones.

# References

* Restaurants: Most Searched Industry by Consumers on Mobile Devices, 08.10.2016.

[http://blogs.constantcontact.com/restaurants-most-searched-industry-by-consumers-on-mobile-devices-and-other-hot-topics/#](http://blogs.constantcontact.com/restaurants-most-searched-industry-by-consumers-on-mobile-devices-and-other-hot-topics/)

1. Restaurants: Most Searched Industry by Consumers on Mobile Devices, 08.10.2016.

   [http://blogs.constantcontact.com/restaurants-most-searched-industry-by-consumers-on-mobile-devices-and-other-hot-topics/#](http://blogs.constantcontact.com/restaurants-most-searched-industry-by-consumers-on-mobile-devices-and-other-hot-topics/) [↑](#footnote-ref-1)