Web and Mobile Enabled Application for Public Health Inspections

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Abstract. This work aims to promote and improve Public Health practices by creating an Information System (IS) to register health inspections performed in health stores by the Public Health Inspectors of the Health Departments of Regions in Greece. The IS was implemented based on open-source programming languages and frameworks. The front end was implemented by JavaScript and Vue.js framework, and the back end by Python and Django.

Keywords. Information systems, public health inspections checklists, mobile applications, food inspections

1. Introduction

Foodborne diseases remain a significant public health challenge worldwide, causing approximately 48 million illnesses and 3,000 deaths annually in America, according to the US Centers for Disease Control and Prevention [1-3]. At the same time, in Europe, the numbers are 23 million diseases and 5000 deaths per year, according to the World Health Organization [4]. Similarly, other diseases can be indirectly caused by food production, such as the lack of good hygiene of food handlers, the insufficient cleanliness of the food preparation area, and the existence of rodents and insects of sanitary importance (flies, cockroaches, etc.). In Greece, public health inspections are carried out, at regular intervals, by Public Health Inspectors using a specific statutory checklist.

2. Methods

The aim of this work was to develop a user-friendly, web-based, and mobile-enabled Information System for Public Health Inspections. Requirement analysis/ needs was the initial step, followed by the system design and implementation and finally its testing-verification by focus group experts.

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3. Results

The developed application implements the digitalisation of public health inspection checklists, which are still implemented on paper. The primary tool is the database with all the implemented inspections in the lifetime of inspection. Furthermore, it makes it easy for the public health inspectors to 1) view all the inspections of their region unit in list, 2) create a new health inspection at the time when they are at the store, 3) search a store by VAT/ License number and view all previous inspections of the specific store and 4) search an inspection. The feedback from focus group experts indicated that the application is easy to use and has quick response. In Figure 1, the inspections list and the creation of a public health inspection are illustrated.
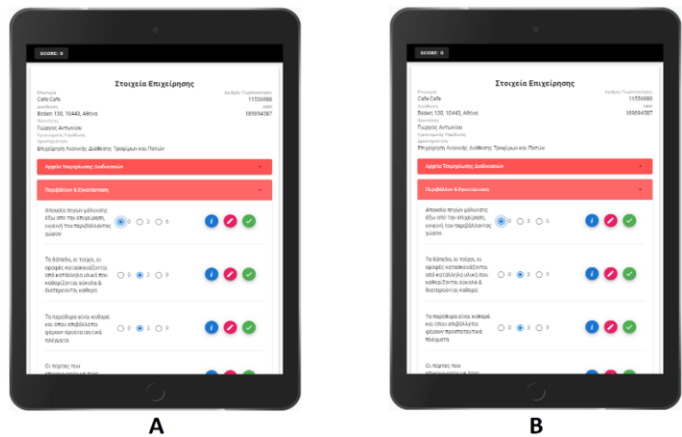

Figure 1. Public health inspections list (A) and creation of an inspection (B) of the developed application.

4. Discussion and Conclusions

This study mainly focuses on the implementation of an information system in which the public health inspections are registered in stores of public health interest by the public health inspectors of. No similar system or app exists in Greece, while internationally there are very few corresponding solutions only available to specialists. Future steps of the implemented information system include the embedding of additional functionalities, such as the monitoring of health business processes by health inspection services in real time, and evaluation reports.

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