Masters Dissertation
"Smart Cafeteria" Adaptive And Interactive Mobile Application

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Outline of Thesis

Outline

"Smart Cafeteria"

- is a part of Smart Campus Project.

http://www.smartcampuslab.it/

- Smart Campus has funded by Trento RISE.

http://www.trentorise.eu/

Outline

Scenarios and Problem

Hungry Students and Busy Professors
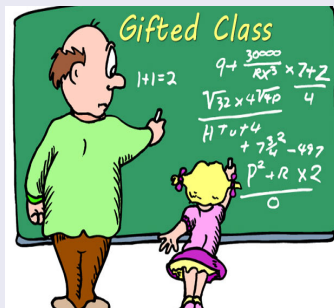
- How to skip the long queue.
- How could know Today's menu.
- Appropriate menu for me(calorie, price).
- Collaborate and share feeling.
- How technology can help.

Objective

Services:

- Mensa Queue Skipper.
- Menu Finder.
- Menu Suggester and Dieting Adviser.
- Customized Menu creator.
- Lunch with Friends.

System has 3 type of serves:

- Provide online cafeteria services.
- Provide dieting services to the students.
- Provide social collaboration services in the application.

Proposed Solution

Create "Smart Cafeteria"

supported by

- web 2.0 system
- Smartphone application.

"Smart Cafeteria"

application should be

- Interactive.
- Adaptive.

Outline

Stakeholders

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- System Users.
    - Students.
    - Professors.
    - Researchers.
    - Universitys Administration Officer.
    - Universitys Technical Staff.
- System Administrator.
    - Cafeteria Staffs.

Functional & Non Functional Requirements

Functional Requirements & Non Functional Requirements

Functional Requirements

- 42 Functional Requirements

Non Functional Requirements

- Usability.
- Internationalization.
- Portability.
- Adaptability.
- Safety and security.
- Documentation Requirements.

Data Gathering & More Requirements

Data Gathering & More Requirements

- Studying Cafeterias Food Menu and Documents.
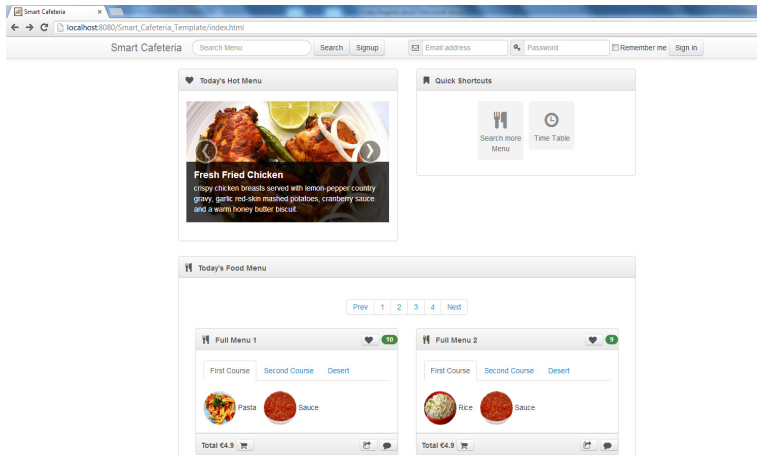- Focus Group - 7 participants.
- Questionnaires.

Outcomes

- "Smart Cafeteria" is usefull application.
- Found 5 more functional requirement.
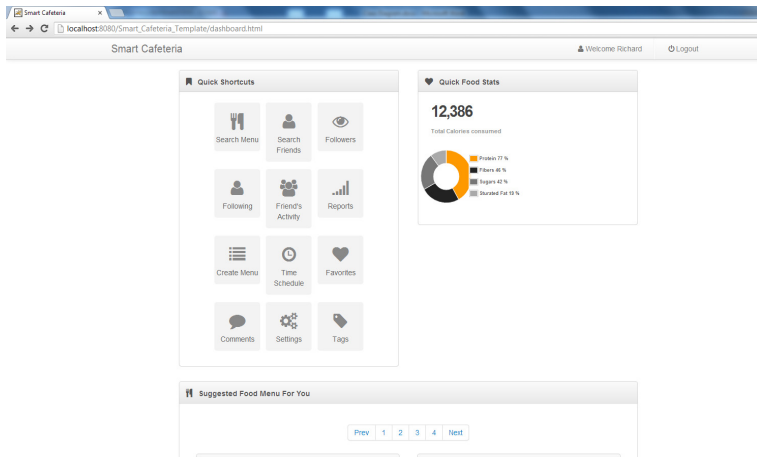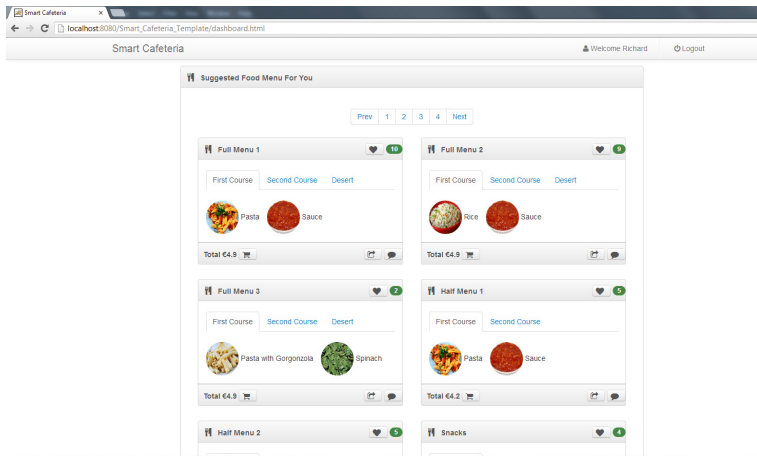- Design UML (Use case, Class Diagram, etc.)

Outline

Desktop Prototype[Index Page]

Desktop Prototype[User Dashboard]

Desktop Prototype[Suggested Food Menu]

Mobile Prototype

Features of Smart Cafeteria

Outline

Evaluation Methodology

User studies and questionnaire Methodology

Target Users (10) students

Given them 9 tasks to perform

Given them 14 questions to test (i) usefulness, (ii) easy to use, (iii) learnability and (iv) Satisfaction

Both Desktop and Mobile Prototype was evaluated.

Evaluation Result

the result was analyzed calculating Mean(μ) and Standard deviation(σ).

Standard Deviation, $\sigma = \sqrt{\frac{1}{N}\sum_{i}^{N}(x_i - \mu^2)}$ where Mean, $\mu = \frac{1}{N}\sum_{i}^{N} x_i$.

Result for desktop

Result for Mobile

Outline

Future Work

Any Questions

Thanks