

Masters Dissertation

“Smart Cafeteria” Adaptive And Interactive Mobile Application

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Outline of Thesis

- 1** Thesis Background
- 2** Problem Statement
 - Scenarios
 - The Problem
- 3** Objective
- 4** Analysis
 - Stakeholders
 - Functional & Non Functional Requirements
 - Data Gathering & More Requirements
- 5** Design
 - Desktop Prototype
 - Mobile Prototype
 - Features of Smart Cafeteria
- 6** Usability Evaluation
 - Evaluation Methodology
 - Evaluation Result
- 7** Conclusion
 - Future Work
 - Questions



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“Smart Cafeteria”

- is a part of Smart Campus Project.



<http://www.smartcampuslab.it/>

- Smart Campus has funded by Trento RISE.



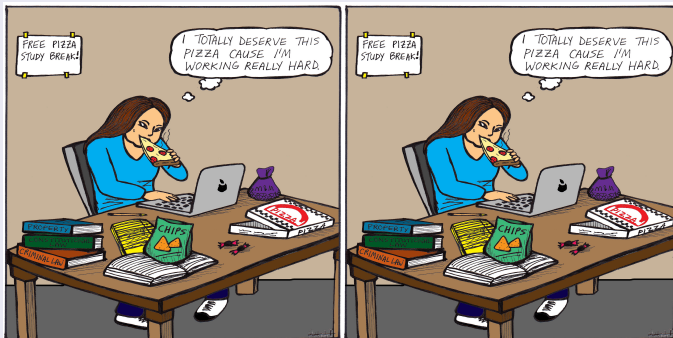
<http://www.trentorise.eu/>



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Hungry Students



Busy Professors



The Problem I

Create “Smart Cafeteria”

Will be supported by:

- web 2.0 Technologies.
- Smartphone application.



The Problem II

“Smart Cafeteria”

application should be

- Adaptive.
- Interactive.



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Proposed Services

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



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Stakeholders

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



Functional & Non Functional Requirements

Functional Requirements

42 FR

Non Functional Requirements

Usability Internationalization Portability Adaptability



Data Gathering & More Requirements

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

Outcomes

- The application is usefull.
- QR BARCODE.
- UML of application (Use case, Class Diagram, etc.)



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Desktop Prototype



Mobile Prototype



Features of Smart Cafeteria



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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.



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 Prototye

Result for desktop



Result for Mobile Prototye

Result for Mobile



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Future Work



Any Questions



Thanks

