

Analysis and design of cloud based information portal for Erasmus Student Network

Diploma Thesis

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Main Goal

- Design information system for Erasmus Student Network (ESN)

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Partial goals

- Analyse needs of ESN.
- Analyse existing solutions.
- Deliver an analysis of cloud solutions.
- SaaS deployment strategy.

Theoretical part (Literature Review)

- Research about cloud computing (SaaS).
- Comparison of existing solutions.
- Development tools research.
- Business process diagrams.

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Practical part

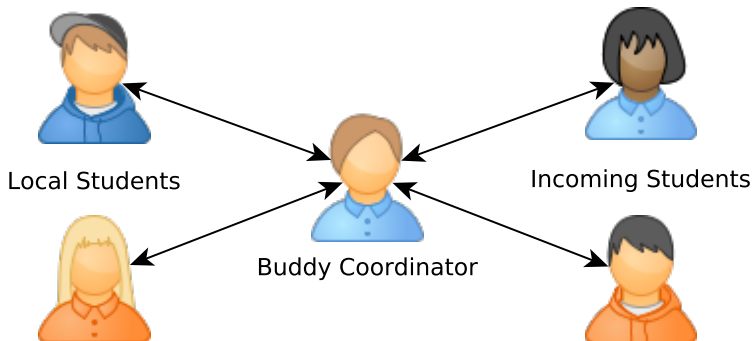
- Information system design according to Objective Oriented Programming (OOP).
- UML Data model.
- UML Use case diagrams.
- Application architecture diagram.



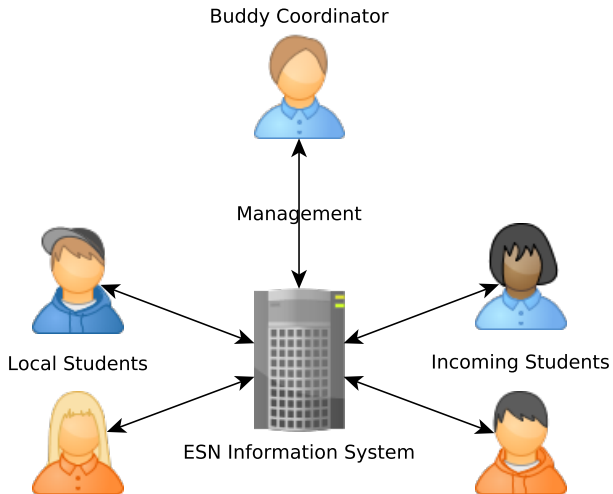
Erasmus Student Network (ESN)

- Biggest student organisation in Europe.
- CULS section of ESN established in 2015.
- Takes care of incoming international students to CULS.
 - Buddies for incoming students.
 - Organising events / trips.

Users Introduction



Users Introduction



Functionality

- User Registrations.
- User Management.
- **Connect incoming international student with local student.**
- Custom events management (imported from Facebook).
- **Registering students to events.**
- Export students and buddies to excel.
- Export Event participants to excel.
- Upload custom logo.
- Customizable disclaimers.
- Email notifications.
- Automatic archive of inactive buddies.

System Requirements

Usability

- Windows 7>, Unix based OS and Mobile OS.
- Web Interface - all common browsers
- Responsive interface.



System Requirements

Reliability

- Availability 99.9% (top downtime 525,6 minutes per year.);
- Daily database backups.
- Daily system backups.



System Requirements

Performance

- Response time less than 5s.
- Average page size less than 500kb.



Supportability

- Data storage and computational power is provided by selected cloud hosting.
- Installation and maintenance is provided by SaaS provider.



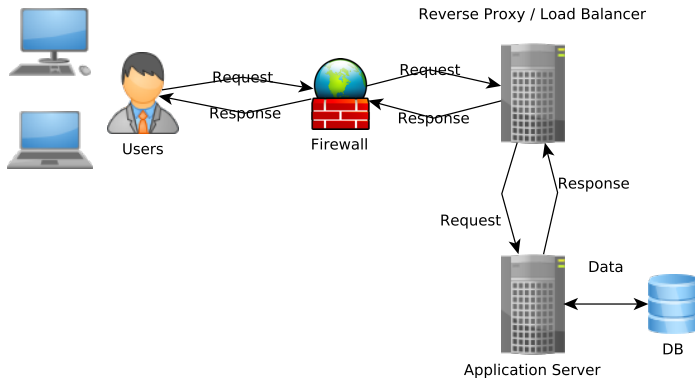
System Requirements

Non-functional requirements

- EU law compliant.
- Register using Google / Facebook (OAuth)



Architecture



Existing solutions

Emails



Existing solutions

Google Sheets



Google Sheets



Conclusion

What benefits the diploma thesis brings to the public?

- Overview of modern cloud technologies.
- System designed to make the buddy matching system effective and raise the prestige of the university.

Personal benefits

- Deepening the knowledge in the field of cloud computing and information system development.
- Helping a volunteering organisation.

Next steps

- Design new modules:
 - Mass mailing system.
 - Custom questionnaires.
 - Automatic buddy matching.

Do you have any questions?

