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**Student records information system at the  
Faculty of Electrical Engineering and  
Faculty of Computer and Information Science**

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# Introduction

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- The project started in September 2001
  - a common project of two faculties: Faculty of Computer and Information Science and Faculty of Electrical Engineering
  - partly supported by the Slovenian Ministry of Information Society
  - extended in December 2002 in order to serve the needs of other member institutions
  - in operation since April 2003
- Main requirements
  - All necessary information regarding the teaching process should be accessible through World Wide Web.
  - Administrative tasks should be simplified and paperwork reduced by the introduction of electronic business methods.
  - The new system must assure safe communication and prevent the misuse of information.

# Functionality of the new system

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- Four different categories of users
  - administrative staff (viz. Student Records Office)
  - students
  - teachers
  - teaching assistants
- Maintenance module
  - maintenance of all data required for the proper functioning
- The administrative staff is offered approximately the same functionality as in the old system.
- New functions have been developed for students, teachers, and teaching assistants.
- Administrative procedures were changed where appropriate in order to fully exploit the benefits of electronic business methods.

# Functionality of the new system

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- All functions are divided into four groups
  - enrolment
  - examination records
  - degree records
  - various statistical surveys
- Enrolment
  - data entry from the Enrolment Form
    - administrative staff
    - students
  - students who have satisfied all requirements for enrolment and have paid the enrolment fee can enroll by filling the form through WWW
  - a special program exists for the entering of choices regarding course attendance

# Functionality of the new system

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- Generation of various documents that are associated with the enrolment event
  - certain required statements for the Statistical Office of Slovenia
  - the Statement of Student Enrolment, given to student
  - various lists of enrolled students
  - reports on number of enrolled students by educational program, year of study, study mode (full-time or part-time) etc.
- For each student also data on administrative decisions of school bodies are maintained
  - citations
  - disciplinary measures
  - exceptional enrolment etc.

# Functionality of the new system

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- Examination records
  - maintenance of examination schedules
  - entry of examination applications
  - entry (and recordkeeping) of examination results
- Examination schedules
  - the default examination schedule is defined automatically at the beginning of each academic year
  - teachers and administrative staff are allowed to specify additional examination dates or modify the existing ones
  - all users can browse the examination schedule using different criteria (e.g. time period, course, year of study etc.)

# Functionality of the new system

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- Examination applications

- Students can apply for an examination or cancel their examination applications through WWW.
- The system checks each application and rejects the applicants that do not fulfil necessary requirements, e.g.
  - a student can apply only for examinations on his/her course list
  - the total number of examination attempts must be below a set maximum
  - students are billed if necessary
- Special functions are available to teachers and administrative staff in order to deal with exceptions, e.g. late applicants or students who were unable to attend the exam.
- At any time, all users can obtain information about those examination applications that concern themselves.

# Functionality of the new system

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- Entry of examination results
  - It is assumed that each examination consists of written and oral part.
  - Results of the written part of examination are entered by teachers or their assistants.
  - System automatically notifies students about their grades and schedule for oral examination.
  - Only those students that passed the written part can apply for oral examination.
  - After the oral examination, the final grade is entered in the system by the examiner or administrative staff.



# Functionality of the new system

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- Lists of passed exams and statistical surveys of examination results
  - Each student is allowed to see a record of all exams he/she passed and grades obtained.
  - Administrative staff can obtain lists of passed exams for all students as well as various statistical surveys of examination results.
  - Teachers can see a complete record of all exams and grades for those subjects they teach.
  - Students can request an official report of examinations through WWW.
  - Corresponding official statements are produced automatically in the Student Records Office and sent to students by post.

# Functionality of the new system

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- Degree records
  - maintenance of data on alumni
  - support of the administrative procedure from the start of work on a degree project till the final degree examination
- Database of available degree projects and advisors
  - each teacher can enter a description of a degree project
  - each student that passed all exams can apply for work on such a project
- Each student's application is checked by a program that
  - verifies whether the student has satisfied all requirements for this step
  - computes the student's average grade
  - generates a notification for the student's degree project advisor

# Functionality of the new system

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- Before the actual degree examination
  - a degree examination record form is generated with all the required data (including members of examination board)
- After the degree examination
  - affidavit that the student has completed his/her education
  - various reports and lists of degree holders
    - by date when degree was earned
    - by study program
    - by grade received
    - by advisor
  - etc.

# Functionality of the new system

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- Various statistical surveys cover the following areas:
  - student progress from year to year
  - calculation of grade point average
  - examination results (for a course selected, a teacher selected, with regard to time elapsed after a course was taken),
  - success after the first year (depending on the secondary school attended and profession after completion of the secondary school),
  - success at the completion of studies,
  - ranking the best students

# Security policy

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- User authentication
  - authentication is based on SSL protocol and requires the clients to authenticate with digital certificates
  - we use digital certificates issued by the certified government agency
  - the same certificates are used in public administration
- Recording additional information
  - additional information (viz. username, IP address, date and time) is recorded when a record is inserted or modified in order to track the sequence and source of changes in database
- Data encryption
  - implemented through Oracle Portal feature that enables data encryption using SSL (Secure Socket Layer) protocol in order to provide secure network connections