Applied Information Systems Introduction

PV028

Semester Schedule

- Sept-December: Lectures, discussions, consultations

Deadlines:

- Semestral essays: set individually
- Final submission: 31st Jan 2025

Evaluation:

- based on extent and quality of submitted essays
- Pass final exam for at least:
  - 50 % - colloquium
  - 30 % credit
    - Multiple choice test
    - At least one answer is correct

Information System

- Set of people, technical means and programs
- Ensures collection, transfer, processing and retention (storage) of data
- Goal is to process and present information required by users which are active in management systems

Application SW

- A program equipment which allows to perform some useful activity
- To interact with users, applications use graphical or textual interface, eventually command prompt
- An application may consist of multiple programs
- System SW or OS does not count as Application SW

Types of Application SW

- Educational SW
- Product Engineering SW (CAD, Visual Paradigm…)
- Simulation SW (research, training, entertainment…)
- Information Worker SW (Accounting, Office suits, Financial, Project Management, SW Engineering…)
- Entertainment SW (video games)

Enterprise Information System

- EIS is created by people who
  - use provided technical means
  - follow given methodology
  - process enterprise data

- Outcome: information and knowledge base of organization

- Purpose:
  - Manage business processes
  - Support managerial decision-making
  - Maintenance of organizational agenda

Properties of Information Systems

- IS is a set of programs integrated into one package whose aim is to fulfil needs of organization (not single user)
- All users work with single set of data stored in single database – the outcome is their common responsibility
- It is not enough that one user does their work in correct, accurate and timely manner – all other users must do the same
  - Need for training and internal organization
  - A consequence of a mistake might be revealed by another department, often later

Properties of Information Systems

- Programs that are part of IS typically do not run on HW of individual users, but on powerful central stations (servers)
- User communicate with server using their client stations
- "Client-Server" regime
- Communication with server is usually remote
  - Server might be in the same building, but also in other city or even country
- Client station might be desktop, laptop, tablet, smartphone or some specialized device

What are we going to discuss?

- Different aspects of various IS
  - Typically, government or state institutions
  - Analysis & Design, Project Management, Service Support, Contracting…

Specifics of State Institutions

- Must strictly follow law & directives
  - In CZ: Administrative Law
  - Therefore, not very flexible
- Focus not on profit but on provision of service to citizens
- Services are typically of "public good" or central coordination
- IS are commonly integrated to some sort of central registers
  - Civic register
  - Business register
  - Address points
  - …

First Essay

Lost ID

- Imagine you have lost your ID and you need to apply for a new one
- Describe the process
  - what documents, materials you need
  - where you need to go?
  - can you apply from home?
  - what steps are necessary? (you can draw a diagram)
  - is the process supported by some sort of web portal / digital / e-government solution?
  - how long the whole process takes?
  - how "user friendly" the process is? How it could be improved?
- Deadline: midnight before next lecture