

# SilverCode Guide to Programming for Elders

assoc. prof. dr. eng. Ciprian-Bogdan CHIRILA

University Politehnica Timisoara

[chirila@cs.upt.ro](mailto:chirila@cs.upt.ro)



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# Outline

- Motivation
- About the SilverCode Project
- The coding guide curricula
- The guide modules
- Tutorial Applications Examples
- Conclusions
- Perspectives

# Why teach elders (55+) to code?

- to be more confident in the use of electronic devices in their everyday life
  - online payments, online shopping
  - e-administration services, e-government services
  - e-health devices
- to be able to socialize with the new generation of descendants
  - to have common topic for discussions about
    - gadgets
    - Emails, email clients on laptops, tablets, mobile phones
    - social networks: Facebook, Twitter, ...
    - communication apps: Skype, WhatsApp, etc.

# SilverCode Project

- Erasmus+ project 2016-1-BG01-KA2014-023736
- Partners: Bulgaria, Slovenia, Italy, Portugal, Austria, Romania, Poland
  - associations working with elders, universities (RO+PL)
- Period: 2 years from 01.10.2016-30.09.2018
- Budget: ~250,000 Euro



- <https://www.silvercodeproject.eu/>

# Modules

- Basic digital skills
- Computational thinking
- Fine tuning with digital language
- Basic of computer programming
- Coding everyday

# Basic digital skills

- Computer parts: MB, CPU, Memory, HDD, keyboard, mouse
- OS MS Windows startup, shutdown, icons, new, copy, cut, paste, delete files/folders/shortcuts
- MS Office: Word, Excel, Powerpoint examples
- Web Browsers, Online E-mailing (Gmail, Yahoo Mail), Skype, Facebook
- Logical blocks schema, algorithms, vector, matrix, syntax, constants, variables, instructions, subroutines, strings in the context of **JavaScript**

# Computational thinking

- What is computational thinking?
- What is coding?
- Why is it important to problem solving?
- Relations between computational thinking and coding
- How to analyze issues?
- How to solve problems using digital skills?
- etc.

# Fine tuning with digital language

- Keywords and terms in English for better understanding of computer programming
- Specific terminology to reflect the digital mind set
- Multi-lingual glossary of online terms.
- Quizzes



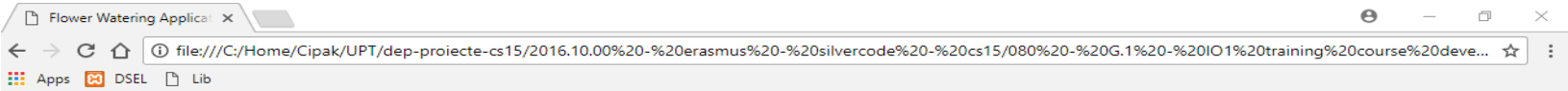
# Basic of computer programming

- Motivational examples
- Introduction to programming languages
  - Java, Latex, C#, Google Sites, Blogger
- JavaScript
  - Read, understand and write simple code
  - Basic concepts of object-oriented programming
  - Basic JS functions
  - To be able to implement examples
- HTML and JavaScript examples
- HTML and CSS and JavaScript examples

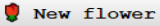
# Coding everyday


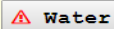
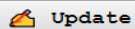
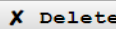

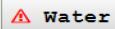
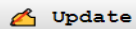
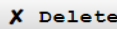

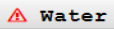
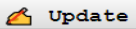
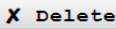

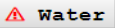
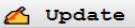
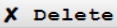

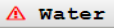
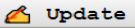
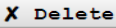

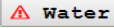
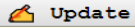
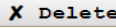
- Flower watering Java Script application
  - To read data from a cookie
  - To write data to a cookie
  - To design a HTML and CSS web interface
  - To add a new flower
  - To list all the flowers marking the ones needing water
  - To water a flower
- Pill reminder JavaScript application
  - To read/write data from/to a cookie
  - To design a HTML and CSS web interface
  - To add a new pill with schedule
  - To list all pills marking those that were not taken
  - To mark a pill as taken

# Flower Watering JavaScript Application



## Flower Watering Application

 New flower

	rose marie rose 2017.8.30 3 days 2017.9.2			
	rose ann rose 2017.8.30 3 days 2017.9.2			
	rose marina rose 2017.8.30 3 days 2017.9.2			
	tutu tulip 2017.8.20 4 days 2017.8.24			
	titi tulip 2017.8.20 4 days 2017.8.24			
	toto tulip 2017.8.20 4 days 2017.8.24			

# Conclusions

- The guide
  - Some parts are still work in progress
  - Contains all the key concepts necessary to write almost state of the art applications
  - Applications strings must be translated
    - Manual approach not internationalization technologies
    - To favor simplicity of the resulting application
  - Variable names may be subject to translation
    - Better understanding of the code

# Perspectives

- To translate the materials in all languages of the project
- To revise the content according to project members observations
- To implement the pilot testing
  - 30 persons from each country
- To strengthen the SilverCode community of elder programmers