

Projects

Project number: 0

Project title: Arduino UPS

Date: Jul 20, 2017

Short description: An UPS made of old UPS and Arduino

Ordered / cooperated by: Andrej Šišila

Position in team: Developer

Processed work part in details: Design and implementation of an UPS on Arduino UNO platform.

Operating system: Embedded (Arduino)

Used languages, software, tools and technologies:

- **Language:** C
 - **IDE:** Arduino IDE
 - **Hardware:** Arduino UNO, Display with keypad
 - **Link:** https://github.com/kyberdrb/Arduino_UPS
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Project number: 1

Project title: (Arch) Linux backup script

Date: Dec 12, 2017

Short description: Backup of entire Linux system to an external storage

Ordered / cooperated by: Andrej Šišila

Position in team: Developer

Processed work part in details: See “Short description”

Operating system: (Arch) Linux

Used languages, software, tools and technologies:

- **Language:** Bash
 - **Link:** https://github.com/kyberdrb/backup_script_arch_linux
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Project number: 2

Project title: Git scripts

Date: May 22, 2018

Short description: Scripts for managing git repositories

Ordered / cooperated by: Andrej Šišila

Position in team: Developer

Processed work part in details:

Scripts for automation of “pull” and “status” operations for multiple repositories and script for automation of “push” operation for a single repository.

Operating system: (Arch) Linux

Used languages, software, tools and technologies:

- **Language:** Bash
 - **Link:** https://github.com/kyberdrb/git_manage_all_repositories
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Project number: 3

Project title: Pong

Date: Feb 7, 2017

Short description: Network multiplayer game “Pong”

Ordered / cooperated by: Andrej Šišila

Position in team: Developer

Processed work part in details: Desing and implementation of a network multiplayer game “Pong”.

Operating system: (Arch) Linux

Used languages, software, tools and technologies:

- **Language:** C
 - **Technologies:** SDL, sockets
 - **IDE:** CodeBlocks
 - **Link:** https://github.com/kyberdrb/semestralka_vstavane_systemy
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Project number: 4

Project title: Keylogger

Date: Aug 20, 2017

Short description: Capture input from a keyboard into a text file

Ordered / cooperated by: friend

Position in team: Developer

Processed work part in details: Modification of an existing keylogger project.

Operating system: Windows

Used languages, software, tools and technologies:

- **Language:** C
 - **IDE:** CodeBlocks
 - **Link:** https://github.com/kyberdrb/windows_keylogger
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Project number: 5

Project title: Párovačka

Date: Nov 28, 2017

Short description: A programm for finding an person from a group of

people to get a gift

Ordered / cooperated by: friend

Position in team: Developer

Processed work part in details: GUI and algorithm desing and implementation. The algorithm finds a person to gift without reciprocity. First version of the application was written in C++ and Qt for GUI. Then it was rewritten into Python and Tk for GUI.

Operating system: Multi-platform

Used languages, software, tools and technologies:

- **Language:** C++ / Python
- **Technologies:** Qt, Tk
- **IDE:** Qt Creator, PyCharm, VS Code
- **Links:**

https://github.com/kyberdrb/Parovacka_Qt

https://github.com/kyberdrb/Parovacka_Python

Project number: 6

Project title: Android application for position tracking of a mobile device

Date: Feb 7, 2017

Short description: Application for gathering information from GPS, Wi-Fi and Bluetooth and their sending to the server

Ordered / cooperated by: Departement of Informatics, FRI ŽU

Position in team: Developer

Processed work part in details: Desing and implementation of GUI, implementation of object-oriented desing, persistent service, file caching and REST client for sending files with location information.

Operating system: Android (4.0+)

Used languages, software, tools and technologies:

- **Language:** Java
 - **IDE:** Android Studio
 - **Link:** <https://github.com/kyberdrb/PedTrack>
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Project number: 7

Project title: LaTeX documentations

Date: May 9, 2018

Short description: LaTeX documentations from various subjects

Ordered / cooperated by: Andrej Šišila

Position in team: Developer

Processed work part in details: Documentation from the subject
“Projektovanie sietí 1” (Networks design 1); my Master’s thesis.

Operating system: Multi-platform

Used languages, software, tools and technologies:

- **Language:** LaTeX
 - **IDE:** ShareLatex
 - **Links:**
https://github.com/kyberdrb/Ing_Projekt-Virtualne_sietove_laboratoria/tree/master/diplomova_praca/praca
<https://github.com/kyberdrb/FRI/tree/master/Ing/2.semester/Projekt>
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Project number: 8

Project title: Watermarking

Date: Feb 11, 2017

Short description: Image watermarking

Ordered / cooperated by: Andrej Šišila

Position in team: Developer

Processed work part in details: Image watermarking (adding and removing) using DCT – Discrete Cosine Transformation.

Operating system: Multi-platform

Used languages, software, tools and technologies:

- **Language:** MATLAB
- **IDE:** MATLAB
- **Link:**

https://github.com/kyberdrb/FRI/tree/master/Ing/1.semester/Teoria_watermarking/dct_watermarking_final

Project number: 9

Project title: pfSense with Squid proxy server

Date: Apr 19, 2018

Short description: Traffic filtering using pfSense as Squid proxy server

Ordered / cooperated by: Andrej Šišila

Position in team: Administrator

Processed work part in details: Deploying pfSense in a local network to filter server-side advertisements and unwanted traffic.

Operating system: pfSense (FreeBSD), (Arch) Linux

Used languages, software, tools and technologies:

- **Link:**

Project number: 10

Project title: dstat

Date: May 5, 2018

Short description: dstat modifications

Ordered / cooperated by: Andrej Šišila

Position in team: Developer

Processed work part in details: Modifications of system monitor utility “dstat” - measuring RAM consumption of specified processes via Bash commands from a Python script.

Operating system: Linux (Debian/Ubuntu)

Used languages, software, tools and technologies:

- **Language:** Bash/Python
 - **Technologies:** Sultan
 - **Link:** https://github.com/kyberdrb/Ing_Projekt-Virtualne_sietove_laboratoria/blob/master/eve_ng/skripty/dstat_cust
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Project number: 11

Project title: EVE-ng Integration Pack

Date: Feb 21, 2018

Short description: Module, that enables secure interaction with a network topology from the web browser

Ordered / cooperated by: Andrej Šišila

Position in team: Developer

Processed work part in details: The modifications were made for telnet and VNC protocols, which were used to remotely connect to the devices in the topology. Mentioned protocols were encapsulated inside SSH tunnels for more secure remote management.

Operating system: (Arch) Linux

Used languages, software, tools and technologies:

- **Language:** Python
 - **Link:** <https://github.com/kyberdrb/eve-ng-integration>
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Project number: 12

Project title: SDN firewall

Date: May 20, 2018

Short description: SDN firewall is a service implemented for a SDN controller

Ordered / cooperated by: Department of Information Networks FRI ŽU

Position in team: Developer

Processed work part in details: Desing and implementation of SDN firewall module for POX SDN controller in Python and creation of a Bash script to interact with the module.

Operating system: Linux (Mininet/Ubuntu/Debian)

Used languages, software, tools and technologies:

- **Language:** Python/Bash
- **IDE:** VS Code
- **Technologies:** Mininet, POX, OpenFlow (1.0)
- **Links:**

<https://github.com/kyberdrb/FRI/tree/master/Ing/4.semester/Integra>

<https://github.com/kyberdrb/sdnfirewall>

Project number: 13

Project title: Linux tutorials

Date: Apr 19, 2018

Short description: Linux tutorials for various Linux distributions

Ordered / cooperated by: Andrej Šišila

Position in team: Administrator

Processed work part in details: Linux tutorials for later reference (installations, fixes).

Operating system: Linux (various distributions)

Used languages, software, tools and technologies:

- **Link:** https://github.com/kyberdrb/Linux_tutorials
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Project number: 14

Project title: Windows tutorials

Date: Feb 10, 2018

Short description: Windows tutorials for various Windows versions

Ordered / cooperated by: Andrej Šišila

Position in team: Administrator

Processed work part in details: Windows tutorials for later reference (installations, fixes).

Operating system: Windows (various versions)

Used languages, software, tools and technologies:

- **Link:** https://github.com/kyberdrb/Windows_tutorials