Pysimulavr

Pysimulavr is a python wrapper over original simulavr package that was created in C++

- It is based on Python3
- It enables the simulator GUI to be run using PyQt5
- Currently supports Ubuntu Linux

Dependencies

Pysimulavr uses a number of open source projects to work properly:

- Python3- Python3, is an easy to learn, powerful programming language.
- Sphnix - Sphinx, is a tool that makes it easy to create intelligent and beautiful documentation
- Simulavr - the SimulAVR program is a simulator for the Atmel AVR family of microcontrollers.
- Ubuntu - Ubuntu, is a free and open-source Linux distribution based on Debian

Simulator GUI

Simulator GUI is a python package that runs the ATMega simulator GUI.

- It is based on Python3
- It runs over top of Pysimulavr
- Has gdb-debugger support

Dependencies

Simulator GUI uses a number of open source projects to work properly:

- Pysimulavr - Pysimulavr is a python wrapper over original simulavr package that was created in C++
- PyQT5 - PyQt5 is a comprehensive set of Python bindings for Qt v5. Qt is set of cross-platform C++ libraries that implement high-level APIs for accessing many aspects of modern desktop and mobile systems

And of course Simulator GUI itself is open source with a public repository
on GitHub.

Installation

Simulator GUI requires Ubuntu to run.

Install latest version of Ubuntu from here and follow the instructions

Pip install Python3

```
$ sudo apt-get install python3-pip
```

Install Sphinx

```
sudo apt-get install python3-sphinx
```

Git clone the two repositories viz. Simulavr, Simlator GUI

```
$ git clone https://github.com/Traumflug/simulavr.git
$ git clone https://github.com/minallaad/SER517-Capstone---Project-10.git
```

Install Pysimulavr

```
$sudo update-alternatives --install /usr/bin/python python /usr/bin/python3.6 1
$sudo update-alternatives --install /usr/bin/python python /usr/bin/python2.7 2
$sudo update-alternatives --config python
$cd ~/simulavr
$make distclean
$./bootstrap
$./configure --enable-python --with-pic
$make
$cd src/python/dist
$python -m pip install ./pysimulavr-1.1.dev0-cp36-cp36m-linux_x86_64.whl
```

Install GUI dependencies

```
$ cd SER517-Capstone---Project-10/
$ pip install -r requirements.txt
```

Starting the GUI

```
$ cd SER517-Capstone---Project-10/
$ python3 main.py
```

Todos

- Package the GUI