GUI绘制界面，log日志记录

<https://www.cnblogs.com/gaigaige/p/7593184.html>

<https://morvanzhou.github.io/tutorials/python-basic/tkinter/>

<https://blog.csdn.net/Limenghui0614/article/details/77895728>

与MySQL数据库连接并进行数据操作

<http://www.runoob.com/python/python-mysql.html>

通过web Service方式实现与MES系统的接口通信

<https://www.cnblogs.com/liulinghua90/p/5823021.html>

定时器，定时任务

<http://cache.baiducontent.com/c?m=9f65cb4a8c8507ed19fa950d100b92235c4380146d8b804b2281d25f93130a1c187babe725251005ce87616202a44957ecfb2172405966e8c5dccd179ded9d6a64ce7d692c0b863005a31db8b84c32b053872aeab81897ad813884dfa5c4ae2344be50&p=b4769a478e9d5aff57ee96795c0880&newp=83769a4781934eac5aea8e6561478e231610db2151d6d6116b82c825d7331b001c3bbfb423251400d9ce7d6601ab4f5aeefa3c763d0923a3dda5c91d9fb4c57479df&user=baidu&fm=sc&query=python+%B6%A8%CA%B1%C8%CE%CE%F1&qid=9d24e30800068fe1&p1=1>

<https://www.cnblogs.com/anpengapple/p/8051923.html>

<https://www.cnblogs.com/LinTeX9527/p/6181523.html>

多线程与UI

<https://blog.csdn.net/u014552624/article/details/60367846>

<https://blog.csdn.net/sm9sun/article/details/53743116>

<https://blog.csdn.net/weixin_38125866/article/details/77018125>

与自检工装通过socket连接并进行数据操作 TCP通信

<https://www.cnblogs.com/aylin/p/5572104.html>

需要使用多线程技术，因为需要与多个设备同时进行操作

与集中器以telnet的方式进行连接

<https://blog.csdn.net/lingfeng5/article/details/73744698>

实现通过init\_dev程序进行交互过程

实现通过dn程序对集中器进行升级

通过ping的方式，检测集中器是否重启完成

<https://blog.csdn.net/shijichao2/article/details/53900200>

<https://blog.csdn.net/maokexu123/article/details/43056799>

此时集中器的IP地址会自动恢复为129.1.22.96，所以需要逐台进行操作，且操作完成需要控制台体对其断电

Mac地址-获取电脑的网卡mac地址或电脑的硬盘ID 获取CPU或主板ID

<https://blog.csdn.net/dongfuguo/article/details/72863950>

<https://www.cnblogs.com/testlife007/p/5702568.html>