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#fileHandling.py - a-gsm 2.064 list/read/write/delete files on uSD example utility
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#Dragos Iosub, Bucharest 2014.
#http://itbrainpower.net
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#Raspberry PI - a-gsm wiring connection:
# Legal disclaimer:
# Incorrect or faulty wiring and/or connection can damage your RPi and/or your a-gsm board!
# Following directives are provided "AS IS" in the hope that it will be useful, but WITHOUT
ANY WARRANTY!
# Do the wiring on your own risk!

#name       RPi     a-gsm shield
#
#POWER a-gsm    16      D7  - power(UP/DOWN)
#RESET a-gsm    18      D6  - reset
#a-gsm STATUS   12      D5  - status
#
#serial TXD0    08      D4  - tx(rxd)
#serial RXD0    10      D3  - rx(txd)
#
#5V         02/04       5V  - on Arduino power IN connector
#GND        06/14       GND - on Arduino power IN connector
#
#IMPORTANT:
# a-gsm's POWER supply input selector must be in "use 5V pin" position
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# this utility must be runned as root (just use: sudo python fileHandling.py)

serialSpeed = 19200#we recommend usage of 19200 bps speed. If you want to use other speed,
first set the a-gsm speed using setSerial.py
usePoweringControl = 1#change it to 0 if you do not want to control powerUP/powerDown the
a-gsm board. In this case, please be sure the a-gsm board is powered UP(the a-gsm green led
lights continuous) before run this utility

#Do not change under following line! Insteed make one copy of the file and play with!
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#definitions for a-gsm control(RPi GPIO mode)
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POWER = 16
RESET = 18
STATUS = 12

i=0
buffd =""
sreadlen = 100#how many chars to read in one try over serial

fileBuffer = ""

import os
import serial
from time import sleep, time
from string import replace
import RPi.GPIO as GPIO

if not os.getuid() == 0:
    print("please use root privileges! try: \"sudo python fileHandling.py\"")
    exit(0)

agsm = serial.Serial("/dev/ttyAMA0", serialSpeed, timeout=1)
agsm.open()

print "Hi folks. Let's play with the uTF from your a-gsm shield. If the uTF card has not
been inserted, power-down the a-gsm and insert the uTF card in to the corresponding socket
and re-run the utility."


#poweron() - power up the modem
def poweron():
  #...function code here

#poweroff() - shutdown the modem
def poweroff():
  #...function code here

#recUARTdata(endchars,to,tm)
#   read from modem - read string is loaded in global var buffd
#   looking for endchars [SUCCESS STRING,FAILURE STRING] and to - TIMEOUT
#   return 0 for SUCCESS, 1 for FAILURE, -1 for timeout
#   tm how many chars to read(maximum) in one loop from serial
def recUARTdata(endchars,to,tm):
    #...function code here
    return SuccessErrorTimeout

#sendATcommand(command, endchars,to)
#   command +"\r\n" is forwarded to modem
#   looking for endchars [SUCCESS STRING,FAILURE STRING] and to - TIMEOUT
#   return 0 for SUCCESS, 1 for FAILURE, -1 for timeout
#   modem response is loaded in global var buffd
def sendATcommand(command, endchars,to):
    global sreadlen
    agsm.write(command+"\r\n")
    return (recUARTdata(endchars,to,sreadlen))

#aGsmWRITE(command)
#   just write command to serial without CR LF
```

```
def aGsmWRITE(command):
    agsm.write(command)


#setupMODEM()
#   just set and look at modem to be ready for usage
def setupMODEM():
    #...function code here


#deleteModemFile(filename)
#   ...delete "filename" from SD
def deleteModemFile(filename):
    #...function code here

#readModemFile(filename)
#   read "filename" contents from SD
#   the content read is loaded in global var "fileBuffer"
def readModemFile(filename):
    global fileBuffer
    #...function code here


#writeModemFile(filename, fileBuffer)
#   write "fileBuffer" in "filename". if "filename" exists, will be erased first
def writeModemFile(filename, fileBuffer):
    #...function code here

#listModemFiles(pattern)
#   list files from SD. Can be filtered using "pattern". Eg.: *.txt. NOT CASE SENSITIVE!*/
#   the files list is loaded in global var "fileBuffer"
def listModemFiles(pattern):
    global fileBuffer
    #...function code here


#RaspberryPI hardware setup section start
if usePoweringControl==1:
    GPIO.setmode(GPIO.BOARD)
    GPIO.setwarnings(False)
    try:
        GPIO.setup(STATUS, GPIO.IN)
        GPIO.setup(POWER, GPIO.OUT, initial=GPIO.LOW)
        GPIO.setup(RESET, GPIO.OUT, initial=GPIO.LOW)
    except:
        GPIO.cleanup()#free GPIO
        GPIO.setup(STATUS, GPIO.IN)
        GPIO.setup(POWER, GPIO.OUT, initial=GPIO.LOW)
        GPIO.setup(RESET, GPIO.OUT, initial=GPIO.LOW)
    GPIO.setwarnings(True)
#RaspberryPI hardware setup section end


#here start the main code

if usePoweringControl==1:
    poweron()
```

```
setupMODEM()
sleep(2)#some delay...


print("The file system (name/ESTENSION) is NOT CASE SENSITIVE!\r\r")
print("List text files, no existing test.txt")
listModemFiles("*.txt")
print fileBuffer
print ""
sleep(2)#some delay...

print("Write \"Hello world!\" in (new) test.txt")
res = writeModemFile("test.txt", "Hello world!")
if res==0:
    print "\r\n***the file has been writen with succes***"
print ""

print("List text files. Now test.txt will be listed")
listModemFiles("*.txt")
print fileBuffer
print ""
sleep(2)#some delay...

print("Let's read test.txt file content")
readModemFile("test.txt")
print fileBuffer
print ""
sleep(2)#some delay...

print("Now, delete test.txt")
deleteModemFile("test.txt")
print ""
sleep(2)#some delay...

print("List text files. Now test.txt is no more present because has been deleted upthere")
listModemFiles("*.txt")
print fileBuffer
print ""
sleep(2)#some delay...

print("List all files.")
listModemFiles("*")
print fileBuffer
print ""
sleep(2)#some delay...



agsm.close()#close serial

sleep(5)

if usePoweringControl==1:
    poweroff()#shutdown a-gsm
```

```
GPIO.cleanup()#free GPIO
```