UDP Client v3.0

Created on Mon Mar 28 15:32:46 2022

@author: Conrado

Version: 3.0

What it is: UDP Client

What it does:

```
1) Creates a Socket with certain parameters
2) Reads XML File
3) Encodes XML File
4) Sends the Encoded XML Data to the Server (v2.0)
3) Waits for the Server's Reply
```

1 - Imports and Parameters

In [ ]:
```python
#Connection Parameters:
port = 54321
serverAddressPort = ("127.0.0.1", port)
bufferSize = 1024
```

2 - Create Socket and Assign Port and Address

In [ ]:
```python
# Create a UDP socket at client side
UDPClientSocket = socket.socket(family=socket.AF_INET, type=socket.SOCK_DGRAM)
```

3 - Functions

3.1 - Send Message Function

In [ ]:
```python
def sendMessage(XMLdata):

    bytesToSend = str.encode(XMLdata) #Encode Message to Bytes

    # Send to server using created UDP socket
    print("Sending message to Server...")
    UDPClientSocket.sendto(bytesToSend, serverAddressPort)
    print("Message sent.")
    return
```

3.2 - Receive Reply Function

In [ ]:
```python
# Waits for Server's REPLY:
def receiveReply():
    print("Waiting for Server's REPLY...")
    msgFromServer = UDPClientSocket.recvfrom(bufferSize)


    #Display Received Message:
    msg = "Message from Server {}".format(msgFromServer[0])
    print(msg)
    return
```

4 - Read XML File and Send it

In [ ]:
```python
fileName = input(">Type the XML filename: > ") #Get file name

#Add File extension if not inserted by the user
if ((".xml" or ".XML") not in fileName):
    fileName = fileName + ".xml"

with open(fileName) as fid:
    FileData = fid.read()

input("> Press any key to send the message...")
sendMessage(FileData)
```