# CS 145 Project Parameter-Adaptive Reliable UDP-based Protocol

## 1 Requirements

• Level Declaration: Level 3

## 2 Documentation

#### 2.1 Code Explanation

The code is divided into 5 major parts: the possible changing of parameters, the getting of transaction ID, the estimation of payload size, the adjustment of the estimated of payload size, and the sending of the remaining payload

#### 2.1.1 changing of parameters

With the assumption of valid inputs, we traverse the arguements by pair after the python file arguement.

```
_name__=="<u>__main__</u>":
arguments=sys.argv
                              default values
ipr='10.0.7.141'
portr=9000
ports=6756
uid="9bb836ec"
payload="9bb836ec.txt"
                        always goes first Traversing by pair
for i in range(0,len(arguments[1:]).2):
                                       Payload Changing
    if arguments[i+1]=="-f":
        payload=arguments[i+2]
                                     IP of receiver changing
    elif arguments[i+1]=="-a":
        ipr=arguments[i+2]
                                    changing port of receiver
    elif arguments[i+1]=="-s":
        portr=int(arguments[i+2])
    elif arguments[i+1]=="-c":
        ports=int(arguments[i+2])
    elif arguments[i+1]=="-i":
        uid=arguments[i+2]
senddata(payload,ipr,portr,ports,uid)
```

Figure 1: parameter changing snippet

Running a python file will have at least 1 arguement and via the argy of the sys module we are able to access it as list of strings with the first index being the python file. To show that this is working, we simply created a show input wherein it shows all the variables like ip of the receiver, the port numbers, the id, and he period. below is a Screenshot shot of testing and showing that the changing of parameters work.

```
C:\Users\user\Desktop\Requirements\cs 145 Project>python rproj.py -f "newfilepath/path.txt" -i cs145 -a 192.168.1.1 -c 1234 -s 4567

path: newfilepath/path.txt
ipreceiver: 192.168.1.1
poert receiver: 4567

port sender: 1234

ID: cs145

C:\Users\user\Desktop\Requirements\cs 145 Project>python rproj.py
path: 9bb836cc.txt
ipreceiver: 10.0.7.141
poert receiver: 9000
port sender: 6756

ID: 9bb836cc

C:\Users\user\Desktop\Requirements\cs 145 Project>python rproj.py -f "newfilepath/path.txt" -i cs145 -a 192.168.1.1
path: newfilepath/path.txt
ipreceiver: 192.168.1.1
poert receiver: 9000
port sender: 6756

ID: cs145

C:\Users\user\Desktop\Requirements\cs 145 Project>python rproj.py -a 192.168.1.1
poert receiver: 9000
port sender: 6756

ID: cs145

C:\Users\user\Desktop\Requirements\cs 145 Project>python rproj.py -a 192.168.1.1
poert receiver: 9000
port sender: 6756

ID: 9bb836cc.txt
ipreceiver: 9000
port sender: 6756

ID: 9bb836cc

ID: 9bb836cc
```

Figure 2: parameter changing test

Each Test case either changes the default values on indication or stay with the default, for a clearer view, all figures will be viewable via a google drive link provided in the Links section with names in the figure number.

### 3 Links

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• GitHub Link: Level 3