Readme

Part I

To Run code for Default Configuration i.e every two router are connected to each other

```
sudo python3 Q1.py
```

To Run the code for Custom Configuration i.e r1-r3 are not directly connected

```
sudo python3 Q1.py --config c
```

Part II

After running each section the plots and server and client data will be stored in the respective folders

```
sudo python3 Q2.py --config <section> --congestion <congestion> --loss
<link loss percentage (int)> --time <uptime>
```

Section can be a,b,c,d

congestion can be reno,cubic,bbr,vegas

loss should int and between 0-100

time should be int and greater than 0

Topologies in Each Section and thier Configurations

Section a

client - h1,h2,h3

server - h4

To Run section b code with default parameters (loss=0, time = 5 and congestion = all)

```
sudo python3 Q2.py --config a
```

After Execution plots will be stored in ./a/plots

Section b

client - h1

server - h4

To Run section b code with default parameters (loss=0, time = 5 and congestion = all)

```
sudo python3 Q2.py --config b
```

After Execution plots will be stored in ./b/plots

Section c

client - h1,h2,h3

server - h4

To Run section c code with default parameters (loss=0, time = 5 and congestion = all)

```
sudo python3 Q2.py --config c
```

After Execution plots will be stored in ./c/plots

Section d

clients = h1

servers = h4

To Run section d code with default parameters (loss=[0,1,3], time = 5 and congestion = all)
cmd to run section d

```
sudo python3 Q2.py --config d
```

After Execution plots will be stored in ./d/plots

Plotting

Running the plots.py will run the whole Q2 question and add the combined plots in thier respective folders.

First Run the Q2.py

```
sudo python3 Q2.py
```

To Run plots.py

```
sudo python3 plots.py
```

After running plots.py addtional plots will be added (for each host combined congestion plot, for each congestion combined loss plot)

The combined plots can be observed in the corresponding folders of each section in the plots folder

Plots Folder

```
./{section}/plots
```