

CS 253 Mark Holliday (written by Dr. Andrew Scott and Dr. Mark Holliday)

Project 1: `smokey.json` Project 1 Output

The following is the output from using the `smoky.json` file (route names were changed in the `main` method to work). This assumes that `smokey.json` is in the same directory as the client and server JavaScript files.

Section 1: Network tests

In one shell the command below is used.

```
node railway_network.js
```

In another shell the command below is used

```
node client_network.js smokey.json
```

The output is below.

NETWORK Tests

```
====Network TEST=1=NETWORK=NAME====  
Smokey Mountain Railway System
```

```
====Network TEST=2=GETTING=ROUTES=ARRAY====  
There are 3 routes on this network  
The type of the routes is object
```

```
====Network TEST=3=ROUTE=NAMES====  
[  
    'Bryson City to Dillsboro',  
    'Bryson City to Nantahala',  
    'Dillsboro to Nantahala'  
]
```

```
====Network TEST=4=ROUTE=NAMES=TOSTRING====  
Bryson City to Dillsboro,  
Bryson City to Nantahala,  
Dillsboro to Nantahala
```

```
====Network TEST=5=Total_Stations====  
There are 3 stations in this network.
```

```
====Network TEST=6=FIND=LONGEST=ROUTE====  
Longest route is: ROUTE:Dillsboro to Nantahala(White)  
STATIONS:  
1 Dillsboro 0 miles
```

```
1 Bryson City 20 miles  
3 Nantahala 38 miles  
Total Route Distance: 38 miles
```

Section 2: Route summary tests

In one shell the command below is used.

```
node railway_routeSummary.js
```

In another shell the command below is used

```
node client_routeSummary.js smokey.json
```

The output is below.

ROUTE SUMMARY Tests

====Route Summary TEST=1=ROUTE=SUMMARY====

Routes Summary

=====

Bryson City to Dillsboro - Bryson City	to Dillsboro	- 20 miles
Bryson City to Nantahala - Bryson City	to Nantahala	- 18 miles
Dillsboro to Nantahala - Dillsboro	to Nantahala	- 38 miles

====Route Summary TEST=2=SORT=ROUTE=BY=NAME=(ASC)====

Routes Summary

=====

Bryson City to Dillsboro - Bryson City	to Dillsboro	- 20 miles
Bryson City to Nantahala - Bryson City	to Nantahala	- 18 miles
Dillsboro to Nantahala - Dillsboro	to Nantahala	- 38 miles

====Route Summary TEST=3=SORT=ROUTE=BY=NAME=(DESC)====

Routes Summary

=====

Dillsboro to Nantahala - Dillsboro	to Nantahala	- 38 miles
Bryson City to Nantahala - Bryson City	to Nantahala	- 18 miles
Bryson City to Dillsboro - Bryson City	to Dillsboro	- 20 miles

====Route Summary TEST=4=SORT=ROUTE=BY=LENGTH=(ASC)====

Routes Summary

=====

Bryson City to Nantahala - Bryson City	to Nantahala	- 18 miles
Bryson City to Dillsboro - Bryson City	to Dillsboro	- 20 miles
Dillsboro to Nantahala - Dillsboro	to Nantahala	- 38 miles

====Route Summary TEST=5=SORT=ROUTE=BY=LENGTH=(DESC)====

Routes Summary

Dillsboro to Nantahala - Dillsboro	to Nantahala	- 38 miles
Bryson City to Dillsboro - Bryson City	to Dillsboro	- 20 miles
Bryson City to Nantahala - Bryson City	to Nantahala	- 18 miles

Section 3: Route tests

In one shell the command below is used.

```
node railway_route.js
```

In another shell the command below is used

```
node client_route.js smokey.json "Bryson City to Dillsboro" "Bryson City"
"Nantahala"
```

Bryson City to Dillsboro is the route used in the first three tests. **Bryson City** and **Nantahala** are the two stops for the extra credit test. The extra credit test determines if there is any single route that contains both of those stops. If there is such a route, it returns a string specifying that route and the number of stops and distance traversed getting from the first to the second stop. Note that the route (if any) found in the extra credit test need not be the same route as the route specified as a command line argument.

In this example there is a route connecting **Bryson City** and **Nantahala** but it is the **Dillsboro to Nantahala** route, not the **Bryson City to Dillsboro** route that is a command-line argument. The output is below.

ROUTE Tests

```
==Route TEST=1=GET=ROUTE==
```

```
Found: Bryson City to Dillsboro
```

```
==Route TEST=2=ROUTE=TO=STRING==
```

```
ROUTE:Bryson City to Dillsboro(Red)
```

```
STATIONS:
```

```
1 Bryson City 0 miles
```

```
2 Dillsboro 20 miles
```

```
Total Route Distance: 20 miles
```

```
==Route TEST=3=ROUTE=DISTANCE==
```

```
Distance of Line as calculated: 20
```

```
====(OPTIONAL) Route TEST=4=BONUS1=FIND=FROM=TO====
```

```
Dillsboro to Nantahala Bryson City to Nantahala 2 stops and 38 miles
```