Steps to execute the code
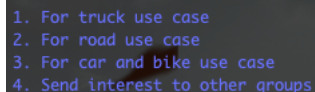
Running through shellscript:
- Give permission to the runme.sh and pass.sh using chmod (chmod +x filename).
- Run ./runme.sh on pi24 and all the devices will start running. In the shellscript, it is written that router.py will execute on pi24 and pi45, truck1_create_sensor.py will run on pi 25 and the rest will run on common pis.
- Run the file python3 actuate_truck.py and select any number from 1 to 4. You can then see interst and data packet flow.
- Some points to remember:
    o Please take care of the directory where you are storing the code. It should be the base dir and then a folder called "scalable_group12_p3-Security" in our case. Make sure that all the files are within this folder.

In case the above approach is not working, please try the following:

- Since we have 5 devices and two routers (primary and secondary), we would need to login to a total of 7 raspberry pis.
- The primary router must run on pi24 and the backup router must run on pi45.
- All the files need to be under the same directory. The folder named scalable_group12_p3-Security contains all the files.
- Run the file router.py (python3 router.py) on pi24.
- Run the file truck1_create_sensor.py on pi25, truck2_create_sensor.py on pi40, car_create_sensor.py on pi41, bike_create_sensor.py on pi42, road_create_sensor.py on pi 43 and the router.py on pi45.
- Note that only the routers must be run on pi24 and pi45. Rest of the files can be run in any of the pis.
- Running the sensor files enables the advertisement piece and generation of data.
- Open one more terminal and run the file python3 actuate_truck.py. After running this, you should be able to see something like this:

- Press any button from 1 to 4 of your choice and relevant interest packet and data packet will flow to and from this device. You will be able to see output like this:

- In the above output, since the primary router was down the backup router was handling the sending and receiving of interest and data packets respectively. This also validates our use case for backup router.
- If you go to the router tab, you can see the available device that has registered with the router by the device type.

Some errors that could come:
- If at any stage we encounter address already in use error, restart that code. If it still doesn't help check which process is running on the same device and kill it.
    - ps -ef | grep .py followed by kill <process_id>
- Routers need to be restarted in case of any kind of error manually since the auto restart is not supported via our code.
- If there are any more issues, please feel free to contact me via team or email me at vsrivast@tcd.ie

NOTE: As mentioned in the report, we also did a small demo for the NDN implementation during the presentation. The code for that is packaged in this zip. The code runs on the pi. Please consider checking that code out as well. We tried our best to implement NDN in the short time we had after the demo.