Create a basic MANET implementation simulation for Packet animation and Packet Trace.

Steps for practical:

1. **Then open inet/examples/**
2. **Right click on manetrouting -create new folder as MobileNet.**
3. **Right click on your newly created folder and select NED file. Give name as Net1. select new adhoc mobility wireless network wizard**

```
//
// This program is free software: you can redistribute it and/or modify
// it under the terms of the GNU Lesser General Public License as published by
// the Free Software Foundation, either version 3 of the License, or
// (at your option) any later version.
//
// This program is distributed in the hope that it will be useful,
// but WITHOUT ANY WARRANTY; without even the implied warranty of
// MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
// GNU Lesser General Public License for more details.
//
// You should have received a copy of the GNU Lesser General Public License
// along with this program.  If not, see http://www.gnu.org/licenses/.
//

package inet.examples.manetrouting.mymanet;

// numOfHosts: 10
// parametric: true
// static:     false

import inet.networklayer.autorouting.ipv4.IPv4NetworkConfigurator;
import inet.nodes.inet.AdhocHost;
import inet.world.radio.ChannelControl;

network Net1
{
    parameters:
        int numHosts;
    submodules:
        host[numHosts]: AdhocHost
        {
            parameters:
                @display("r=,,#707070");
        }

        channelControl: ChannelControl
        {
            parameters:
                @display("p=60,50");
        }

        configurator: IPv4NetworkConfigurator
        {
```

```
            @display("p=140,50");
        }
}
```

a file omnetpp.ini will be created with the following code

```
[General]
network = Net1
#record-eventlog = true
#eventlog-message-detail-pattern = *:(not declaredOn(cMessage) and not
declaredOn(cNamedObject) and not declaredOn(cObject))

*.numHosts = 10

num-rngs = 3
**.mobility.rng-0 = 1
**.wlan[*].mac.rng-0 = 2
#debug-on-errors = true

tkenv-plugin-path = ../../../etc/plugins

**.channelNumber = 0

# channel physical parameters
*.channelControl.carrierFrequency = 2.4GHz
*.channelControl.pMax = 2.0mW
*.channelControl.sat = -110dBm
*.channelControl.alpha = 2
*.channelControl.numChannels = 1

# mobility
**.host[*].mobilityType = "MassMobility"
**.mobility.constraintAreaMinZ = 0m
**.mobility.constraintAreaMaxZ = 0m
**.mobility.constraintAreaMinX = 0m
**.mobility.constraintAreaMinY = 0m
**.mobility.constraintAreaMaxX = 600m
**.mobility.constraintAreaMaxY = 400m
**.mobility.changeInterval = truncnormal(2s, 0.5s)
**.mobility.changeAngleBy = normal(0deg, 30deg)
**.mobility.speed = truncnormal(20mps, 8mps)
**.mobility.updateInterval = 100ms

# ping app (host[0] pinged by others)
*.host[0].pingApp[0].destAddr = ""
*.host[*].numPingApps = 1
*.host[*].pingApp[0].destAddr = "host[0]"
*.host[*].pingApp[0].startTime = uniform(1s,5s)
*.host[*].pingApp[0].printPing = true

# nic settings
**.wlan[*].bitrate = 2Mbps

**.wlan[*].mgmt.frameCapacity = 10
**.wlan[*].mac.address = "auto"
```

```
**.wlan[*].mac.maxQueueSize = 14
**.wlan[*].mac.rtsThresholdBytes = 3000B
**.wlan[*].mac.retryLimit = 7
**.wlan[*].mac.cwMinData = 7
**.wlan[*].mac.cwMinMulticast = 31

**.wlan[*].radio.transmitterPower = 2mW
**.wlan[*].radio.thermalNoise = -110dBm
**.wlan[*].radio.sensitivity = -85dBm
**.wlan[*].radio.pathLossAlpha = 2
**.wlan[*].radio.snirThreshold = 4dB
```

right click on ned file and run it as omnetpp simulation