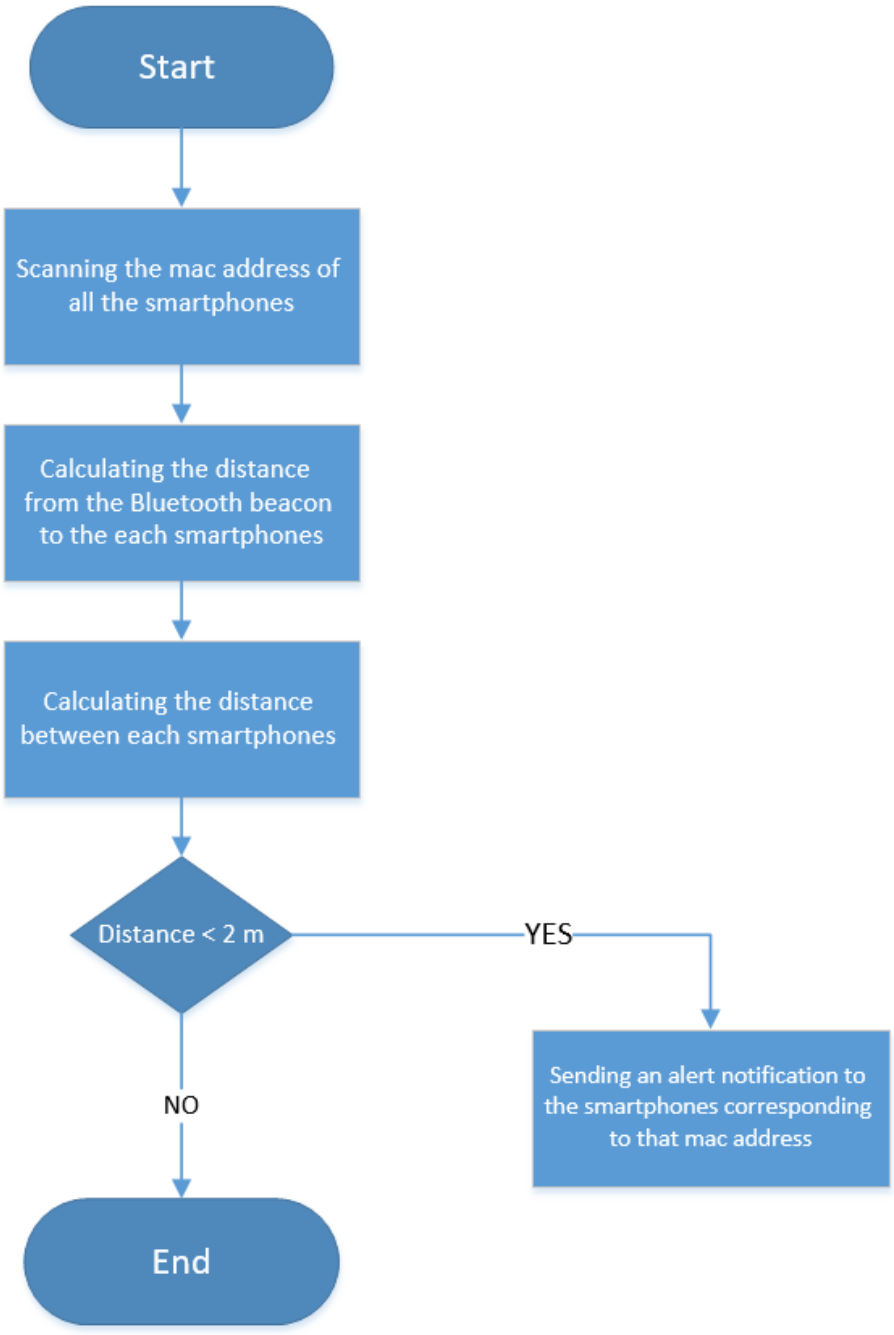
1- **The used technology**: Bluetooth beacon

2- **Working principle**:

The Bluetooth beacon receive the MAC address of the Bluetooth device along with the Received Signal Strength Indicator (RSSI) which gives the quality of the transmission with each device. RSSI values usually go from -40 dBm (nearest nodes) to -90 dBm (farthest ones). In the tests performed devices at 10m reported -50 dBm as average, while the ones situated at 50m gave us an average of -75 dBm [1].

According to this information we can measure the distance between the Bluetooth beacon and more than one smartphone. Then we can measure the differences between two or more smartphones, if the distance was less than 2 m the server will send a notification to that smartphones to alert the users to keep a suitable distance.

3- Algorithm:



References:

[1] libelium, " Smartphone, cellular and hands-free mobile phone detection" [Online]. Available: http://www.libelium.com/products/meshlium/smartphone-detection/ .[Accessed 1 July 2020].

Trainer's name: Rose Nasser alaslani