**Ns-3:**

**About Ns-3 simulator:**

NS-3 is a discrete-event, packet-level network simulator that's used to model internet systems and wireless networks.

All the APIs are documented using [**Doxygen**](https://www.nsnam.org/docs/release/3.42/doxygen/index.html)

To learn on ns3: [https://www.nsnam.org/docs/tutorial/html/getting-started.html](https://www.nsnam.org/docs/tutorial/html/getting-started.html%20)

**Phases of our project:**

* At first, we describe the research question / problem
* Next, design the prototype of proposed system based on related models
* Then, choose the appropriate performance metrics and variable parameters for system evaluation
* After that, implement the model and configure the suitable static parameters
* Further, configure the simulator for generate necessary performance values
* Next, simulate the network model and acquire the performance values after execution
* At last, investigate and understand the obtained results

**Significant Process in Wireless Body Area Network:**

* The internet will provide the network to the Bluetooth and GPRS
* The network coordinator and temperature offers the motion, SpO2, and ECG sensor for the body area network

(GRPS 🡪General Packet Radio Service (GPRS) is a wireless data system that allows mobile users to access the internet over 2G, 3G, and Wideband Code Division Multiple Access (WCDMA) mobile networks,

SPO2 🡪Oxygen Saturation).

**Noticeable Algorithms in Wireless Body Area Network**

* **Unsupervised Learning Algorithm**
  + Dimensionality Reduction
  + PCA
  + ICA
  + SVD
  + Clustering
  + Hierarchical
  + Fuzzy c Means
  + K Means
* **Supervised Learning Algorithm**
  + Classification
  + ANN
  + SVM
  + Random Forest
  + Decision Trees
  + Bayesian
  + Regression
* **Reinforcement Learning Algorithm**
  + Q Learning

Omnet++ simulator:







