

Design Specifications:

- a. Keep Alive Implementation:
 - Sent out keep alive messages to a node's neighbors every 2 seconds in a thread, and the keep alive messages contains the sender's **name, uuid, port number, distance metric**
- b. Link-State advertisement implementation:
 - Sent out link-state advertisements to a node's neighbors every 2 seconds in a thread, and the LSAs contain the sender's **name, sequence number of message, information on the sender's neighboring nodes**
- c. Libraries used (optional; name, version, homepage-URL; if available).
 - Used **sys** (reading input from terminal), **ast** (turning a string into dictionary), **socket** (used for receiving and sending messages), **threading** (used for creating threads for concurrent capabilities), **json** (for building string representation of dictionary), **time** (used for timing threads), **heapq** (used for min-heap for dijkistra's algorithm for rank function)
- d. Extra capabilities you implemented
 - No extra capabilities