# भारतीय सूचना प्रौद्योगिकी संस्थान गुवाहाटी

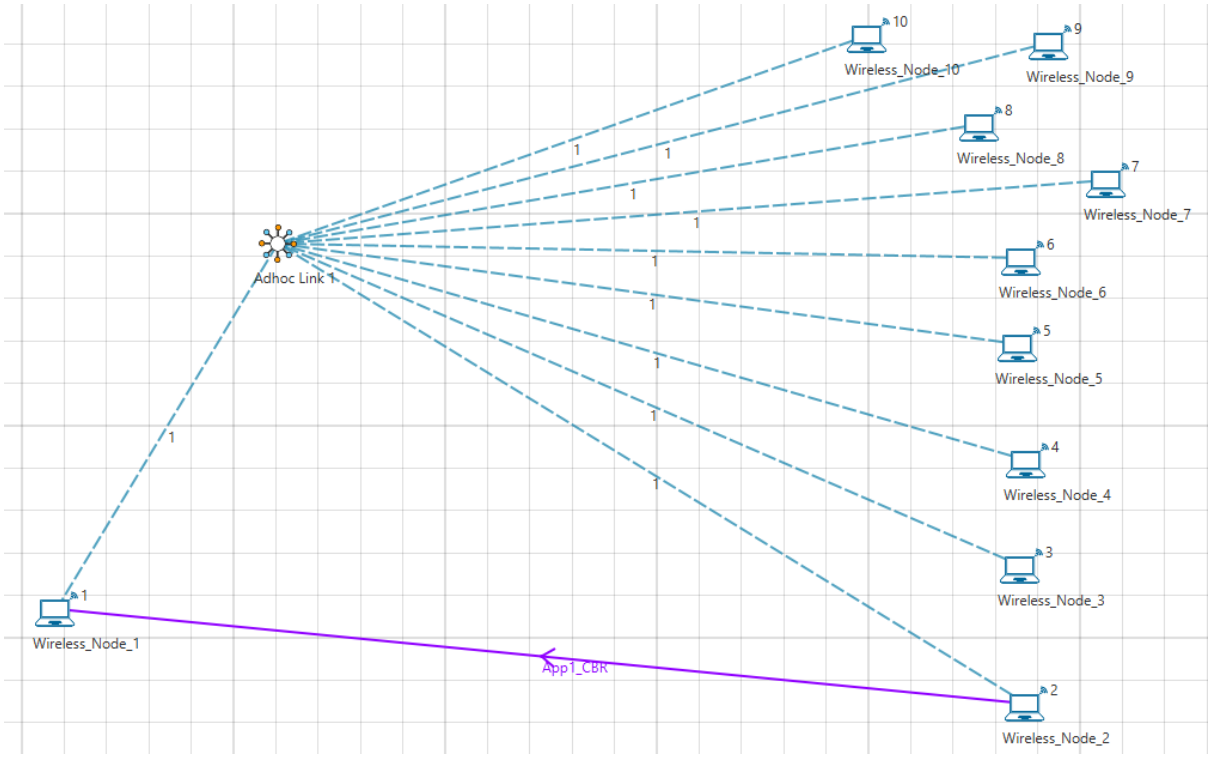
**INDIAN INSTITUTE OF INFORMATION TECHNOLOGY GUWAHATI**

Bongora, Guwahati, Assam-781015


## Computer Networks Lab (CS 353): Lab 5/Assignment 3(Graded)

---

Create a wireless network of 10 nodes connected together using the ad hoc link in NetSim (Use legacy networks package). Create multiple CBR applications between different wireless nodes (2-10) with wireless node 1 as the destination. Applications begin transmission at 2 seconds and end at 24 secs.




Compare the performance of medium access control (MAC) protocols: Pure Aloha and Slotted Aloha. Set the number of retries to default value of 0. The slot-length in slotted aloha is 1200 micro seconds. Choose a no-path-loss wireless channel. Run the simulation for 50 seconds.

1. Measure the performance of **Pure Aloha** and **Slotted Aloha** in terms of following:
   a. Throughput
   b. Mean delay
   c. No. of packets collided vs. no. of packets transmitted
2. Increase the retries limit to 5 for each station. Compute the throughput and mean delay for both Pure Aloha and Slotted Aloha and compare the results.
3. Repeat the experiment by increasing the number of nodes to 20, 30 and 40.