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Exercise No. 9
Peer-To-Peer Networks
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Exercise 15 *Cuckoo Chord*

1. Implement a simulation for Cuckoo Chord from Awerbuch and Scheideler which provides join and leave operations for peers. Display the position of each peer and the regions of size k/n (rounded to the next power of two). It is not necessary to simulate or display the Chord pointers. Display the role of honest and dishonest peers by color.

2. Simulate a series of 100 join operation for $k = 5$ of 20 dishonest and 80 honest peers.

3. Now, simulate a rejoin attack to the first 5 regions of additional 5 dishonest peers. For this, repeatedly perform join and leave operations until all these 5 regions are occupied by a majority of dishonest peers.