DUPLICATE IP ADDRESS AND ITS CONFLICTS :

1. Duplicate IP addresses for nodes in same network leads to conflict in communication and instability in the network.
2. Packets may get re-routed , ARP packets may get multiple replies in switch leads to confusion. Thus , frequent disconnections may happen.
3. IP spoofing may lead to security related threats.

REASONS FOR DUPLICATE IP ASSIGNMENT :

1. DHCP server may allocate same IP to different clients in same network.
2. Lack of synchronization between DHCP servers may lead to same IP allocation
3. Repeated manual allocation of IP addresses.
4. Disconnection and rapid reconnections lead DHCP release of IP address thus server may rapidly assign the IP to other device meanwhile the reconnected device might use same IP address.

HOW TO AVOID DUPLICATION IN IP ASSIGNMENT :

1. DHCP servers will ping the valid IP to be allocated before actual allocation.