Connect(channelID, capacity)

Is channelID entry present in channelHashTable ?

— NO → Retrieve unused channel from linked list of free channels → Set the channels ID and maximum capacity → Place pointer to channel in channelHashTable using the channel ID as key → Place value 1 into channelStatusHashTable using the channel ID as key → **Return pointer to channel**
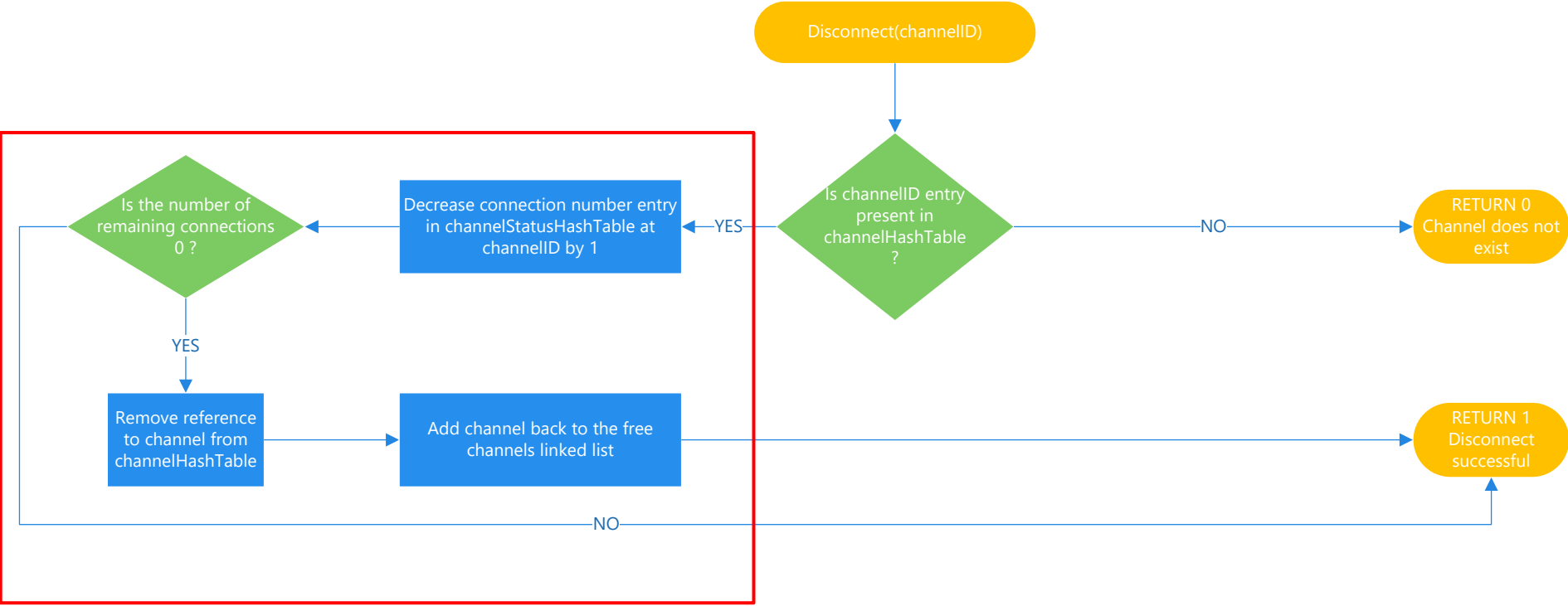
No other task has requested a channel with channelID yet, so an unused channel needs to be set-up

— YES → Increase connection number entry for channelID in channel status hash table by 1 → **Return pointer to channel**

Disconnect(channelID)

Is channelID entry present in channelHashTable ?

— NO → **RETURN 0 Channel does not exist**

— YES → Decrease connection number entry in channelStatusHashTable at channelID by 1 → **Is the number of remaining connections 0 ?**

— YES → Remove reference to channel from channelHashTable → Add channel back to the free channels linked list → **RETURN 1 Disconnect successful**

— NO → **RETURN 1 Disconnect successful**

RECYCLE CHANNEL