**Code Analysis observation**

In my analysis the following are bugs,

1) Inside the CanReceiveMessage() method,

At the end we always returning true, which is incorrect.

Example

**I/O Assumptions**

If the currentuser and recipient are different and permissiontomodifyrecipient is false for current user and if we have only one message,

**O/P Assumptions**

We need to get the failedmessage list count as “**1**” but we will get list count as “**0**” and message should not get updated with recipient but here message will gets updated with recipient.

So the test case will fail and can catch the bug.

2) if(successfulMessages.isEmpty()){

}

successfulMessages condition is getting checked for empty but it should be checked for not empty

eg: if(!successfulMessages.isEmpty()){

}

**I/O Assumptions**

If the currentuser and recipient are different and permissiontomodifyrecipient is true for current user and one message with addrecipientallowed is true.

**O/P Assumptions**

We need to get the failedmessage list count as “**0** and we get the correct count.

Message should get updated with recipient but here message will not get updated with recipient.

3) if(successfulMessages.isEmpty()){

recipientManager.addRecipient(currentUser,successfulMessages)

}

For successfulmessages we need to add the recipients but here are passing the currentUser.

**I/O Assumptions**

If the currentuser and recipient are different and permissiontomodifyrecipient is true for current user and one message with addrecipientallowed is true.

**O/P Assumptions**

Message should get updated with recipient but here message will not get updated with proper recipient.

**Note:**

I feel reasons for not catching the bugs with unit tests are ,

If we have the tests to verify the successfulmessage, we would have catch the bugs. The test only checks for the failedmessages.

Should have proper validation for updatedmessages also to verify the actual updated recipient.