Answers for Code Analysis/White-box Testing

1. The three bugs

The three bugs in the code are

1. The successful messages are never added to the recipient. The code would never add at least a successful message to the recipient.
2. When all the messages failed, the code tries to add recipient to an empty array.
3. The code receives the message irrespective of the scenario whether
   1. User does not have permission to add recipient and
   2. User is not same as recipient

2. How to identify the bugs

“Validating Add Recipient test” should have captured the bug 1. The given test does not verify whether the recipient is added to the message.

Adding the test scenario of passing only failed messages, should have captured bug 2.

Adding the test scenario where the

User is different from recipient and

User does not have permission

will capture the bug 3.