

Task 2

1. What do you think is wrong with the code, if anything? Can you see any potential problems that could lead to unexpected behaviour?
 - (a) If any part of `req.body` is something that could be tampered with by a user then it should be escaped before being sent to the auth service (although it may be the case that the auth service is escaping this).
 - (b) A 200 response from auth system is interpreted as the user already being invited to the shop. Either the developer of this method has made a mistake and the 200 means something else, in which case the system might behave incorrectly, or the auth system is indeed returning a 200 in the case that resource already exists, which is poor practice and should be amended.
 - (c) The second of the nested ifs [`if (shop . invitations . indexOf (invitationResponse . body . invitationId))`] will only ever evaluate to false if the invitationID is already contained in the shop's invitation array at the first index. In all other cases (including id the invitation is already in the array but at a different index) it will evaluate to true, and the invitation will be added to the array. This seems incorrect, as as the expected behaviour would be that we only add it to the array if it's not already there, i.e. changing the if to `if (shop . invitations . indexOf (invitationResponse . body . invitationId) === -1)`. If this is not a mistake, but is in fact the expected behaviour for some reason, then the developer should clarify this with a comment.
 - (d) The only response status codes from our call to the auth api that we handle are a 200 and a 201. Most probably there are other possible erroneous cases that at the moment we are not handling.
 - (e) Because this is one big block of code it is both difficult to reuse any part of it, as well as to test the different parts of its functionality in isolation. It's also harder to read. A potential refactoring is discussed below.

2. How might you refactor this code: **See my attached code refactor.**
Note that due to time-limited nature of this task I have not tested whether my refactor runs, rather it represents the approach I would take to refactoring.
3. **Feedback:** might be helpful if you numbered the lines of code in the pdf, so that one can easily reference specific lines when discussing their solution.