

# Quality Assurance Evidence

## Code reviews

Throughout the assignment, we reviewed each others code. Depending on the time commits were pushed to GitLab we conducted our code reviews differently. If commits were pushed close to a scheduled meeting (such as before on the day or the evening before) we would look at the newly pushed code together during the meeting. If code was pushed further away from a meeting we individually looked at it and left comments. During the start of the project we used group messaging to make our review comments but as the project progressed we found commenting in GitLab more effective.

<https://git.cs.kent.ac.uk/jjn5/software-dev-a2/-/commit/9dbb070cf53a72a6eb9b63de7ec8c5d1c8785aa6>

This is an example of changes made as a result of a code review in a meeting during one of our Tuesday class meetings. The code review led to changes in areas such as more meaningful variable names.

**Joe 2** 09/03/2021

```
61 65 String query = "SELECT COUNT(username) " +
62 -- "FROM Doctors " +
63 -- "WHERE password = '" + password + "' AND username = '" + username + "'";
64 66 + "FROM Doctors " +
65 67 + "WHERE password = '" + password + "' AND username = '" + username + "'";
66 68 ResultSet rs = statement.executeQuery(query);
67 69 rs.next();
68 70 int matches = rs.getInt(1);
```

I think its more easily readable when the SQL is on the same indentation

**Cyrus** 09/03/2021  
yeah makes sense


**Joe 2** 09/03/2021  
Do really like the updating of indentation where it fits the SQL indentation tho

```
String query =
"SELECT *" +
"FROM Patient" +
"WHERE doctor_name = '" + user.getUsername() + "'";
"FROM Patient" +
"WHERE doctor_name = '" + user.getUsername() + "'";
ResultSet rs = statement.executeQuery(query);
```


**Cyrus** 09/03/2021  
I dont mind whatever tbh  
but that last image needs changing for both of them  
as they dont have a space  
at the end of the lines so its not gonna work

During this code review using our group chat, it was discovered that spaces were not included at the end of lines being concatenated, leading to SQL syntax errors. Changes to indentation were also discussed.

441	493	+	
	494	+	}
	495		}


**Joseph Nunn** @jjn5 · 3 hours ago
 Maintainer
👍
✎
⋮

I think there is a problem with how newID is created. The most significant two digits of the id will always stay at 0, the ids will replicate every 10 logs, and it won't work if the log table is empty (won't create an initial L000 id).


**Cyrus Bharry** @cssb2 · 2 hours ago
 Maintainer
👍
✎
⋮

yeah I noticed that when I pushed to git, I'll make the changes tonight when I do the test classes, probably why I shouldn't do work at 4am as stuff like this happens

[https://git.cs.kent.ac.uk/jjn5/software-dev-a2/-/commit/a4888cb05007d2fe70d2da7125b7226e311e04a3#note\\_28058](https://git.cs.kent.ac.uk/jjn5/software-dev-a2/-/commit/a4888cb05007d2fe70d2da7125b7226e311e04a3#note_28058)

This code review shows our switch to using GitLab comments between meetings and details the reviewing of how ids were created for log entries.

## Refactoring

During the development process, we refactored our code to make it better structured.

<https://git.cs.kent.ac.uk/jjn5/software-dev-a2/-/commit/d6d9a3148dae30044047fadebb60c257c5136aa5>

This is an example of a refactor creating two methods out of one large method. As part of the method `getNewMessages()`, the time the user last accessed messages was updated as part of the method. The updating of the last accessed time was moved into a new method `update_last_accessed()`.

<https://git.cs.kent.ac.uk/jjn5/software-dev-a2/-/commit/f33e9dbb3a769b1f631bcf403d033c68ef8f68e4>

This is an example of a refactor moving an import statement to the top of the file above the Javadoc comment to conform to Java style conventions.

## Issue tracking

When we came across issues we informed group members about the issue through our group chat and filled in an entry in the issue tracking document explaining it. We explained it in further detail in our next SCRUM meeting and documented what issue we discussed in the meetings document. After the issue was resolved we informed our group members of it being solved in our group chat, in the SCRUM meeting, and documented its resolution in the issue tracking document. Errors and what input caused them to be discovered in tests were documented in the test logs.

```

Joe 2 25/02/2021
ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails (na499, #sql-1c25_513b9, CONS TRRAINT #sql-1c25_513b9_ibfk_1 FOREIGN KEY
(patient_ID) REFERENCES Patient (patient_ID))
Got that error message when using ALTER TABLE Bookings ADD FOREIGN KEY (patient_ID) REFERENCES Patient(patient_ID);

```

Example of informing group members about the occurrence of an error upon discovery in the group chat.

## Joseph Nunn

### What I did:

- Added connection details and query to the database in BookingSystem. Login credentials can now be checked to see if they are correct.

### What I need to do:

- Getting a doctor's new messages from the database.
- Encrypting the passwords so they are not stored as plaintext.

### Problems:

- Had trouble connecting the database with the correct details. I needed to add the my-sql-connector.jar file to the IntelliJ libraries.

Example of issues being explained in SCRUM meetings.

loginTestIncorrect3	Login with incorrect username and correct password  3 assertTrues used	24/02/21	FALSE FALSE FALSE	FALSE FALSE FALSE	Yes	None
getNewMessagesTest1	Get a single message for the doctor logged in as 'TES1'	25/02/21	Linked list containing the string : 'D: TES1, P: TP01'	[]	No	Modify the SQL query so that before every test the time of the message sent is changed to a time

Example of documentation of issues found in the test logs.

## Issue Tracking

Issue	Date encountered	Solution	Date solved
Can't connect to the database using JDBC. Errors due to not finding database.	22/02/21	Installing drivers and adding J/8 connector to IDE libraries.	23/02/21
All tests failed for get messages user story. Time of the messages sent in test is not set as after the last login of the doctor.	25/02/21	Modifying the SQL query so that before every test the time of the message sent is changed to a time in the future to simulate a new message being sent after login.	25/02/21

Example of entries in the issue tracking document.