

Question 5 uses this context.

The equipment must be tested every two years to make sure it is safe to be used. If equipment fails the test or becomes overdue for a test, it cannot be used.

Haroon needs to track this activity.

5**Assess** the extent to which the database can be used for this purpose.**(9)****Sample response 1***Factors you are going to consider*

1. safety tests that are due need to be found
2. safety tests need to be recorded including the AssetNumber, the date of the safety test, the status of the test i.e. whether the equipment has failed the test. The fault, if there is one
3. faulty equipment or equipment overdue a safety check should not be allowed out on loan

Consideration and significance

1. The current structure would allow safety tests that are due to be found. The Equipment table has a field called LastSafetyTest. This holds the date when the safety test was carried out. A problem with it is that there is no validation to prevent the user from inputting dates that are not correct. For example a date in the future or dates far back in time. This is important, but I don't think it is a significant problem.
2. The current structure would also allow safety tests to be recorded. The Equipment table has AssetNumber, LastSafetyTest, Faulty and FaultNotes fields. This means the relevant piece of equipment can be found, the date of the test can be added, equipment can be highlighted as being faulty and the fault can be described. However, there are problems with it. The only method for inputting a safety test is by opening the table and inputting directly into it and the user interface has not been considered at all. This is a significant downfall overall when all the problems are considered. The user could accidentally change or delete records that are already there. Another problem is the lack of validation. For example the user could tick to say there is a fault but not actually say what the fault is, or they could tick to say there is a fault but not have input the date of the test etc. Also the table has not been normalised properly meaning there can only ever be information about one safety test. It has not been recognised that a piece of equipment would require many safety tests. Really LastSafetyTest, Faulty and FaultNotes are repeating attributes that have not been recognised as such. This is more significant than the direct entry and validation problems as it seriously limits the effectiveness of the database.
3. This current structure would allow this to take place, but it would be very difficult at the minute. The only way to record a loan is to directly input it into the tblLoan again the user interface has not been considered at all. This method of data entry carries the same problem of accidentally changing or deleting records that are there but brings other more significant problems. Currently there is nothing preventing the user adding a record for a loan for a piece of equipment that has a fault or for one that is overdue a safety test. This is a significant problem that could, at the worst endanger employees or at the least make them annoyed when something is not working. The biggest reason for this problem is the method of data entry. A form would allow queries to be incorporated filtering to only equipment that should be allowed out on loan.