Assignment 1
Task 2

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Question 1: What are the three most important quality attributes for the system under test from a <u>user's</u> perspective? Justify each choice.
Write one paragraph of justification per quality.

Quality 1: Usability
Justification: Usability is one of the most important quality attributes because it is a measure of how well a specific user in a specific context can use a software system to achieve a defined goal effectively, efficiently, and satisfactorily. Giving an example, from a user's perspective, when a patron is borrowing or returning an item, he/she will expect AAL's modified BAT system to be user-friendly for a smooth borrowing or returning process.

Quality 2: Reliability
Justification: Reliability is how consistent or dependent the results produced by the system. From a user's perspective, a staff would expect AAL's modified BAT system to calculate a late fee accurately when items are returned. Hence, when an overdue item is being returned, a late fee will be charged and when an item that is not overdue, a late fee will not be charged.

Quality 3: Availability
Justification: Availability is how accessible the system is during and after unexpected events, such as power outages or network failures. This affects user experience because during and after unexpected events, if the system is down, users won't be able to access to it. In this context, AAL's modified BAT system should still offer access to books, magazines, newspapers, and public PCs connected to the internet.

Question 2: What are the three most important quality attributes for the system under test from a <u>developer's</u> perspective? Justify each choice.
Write one paragraph of justification per quality.

Quality 1: Scalability
Justification: Scalability is a system's ability to accommodate to an increase and decrease in the number of users. In this context, since AAL is a community library, many users will be accessing AAL's modified BAT system. Therefore, this is one of the most

important quality attributes for the system developer because if the system is not able to handle low to high number of users, this will lower the user experience.

Quality 2: Security
Justification: Preventing unauthorized access and protecting user data is vital for the system developer. This is because AAL's modified BAT system manages user registration in the library, if user data is leaked, unauthorized access would cause items to be stolen, and users may be falsely accused, or unintentional late fees may be charged. This will lower the user experience. Hence, this is one of the most important attributes for this system developer.

Quality 3: Maintainability
Justification: Maintainability is how easy it is for a developer to repair, improve, and understand the software code. In this case, developers would want easily to repair, improve and understand AAL's modified BAT system code as this will be less time consuming for the developers when performing maintenance for the system currently and in the long run. Thus, further improvements can be made more efficiently to the system which will also improve user experience.