

Black Box testing:

The black box testing focused on functional testing of the Learning Buddy application. It encompassed testing scenarios related to user interface interactions, navigation flow, and functionality across different screens and features of the application. The primary areas of testing included:

- Verification of initial screen appearance and functionality.
- Validation of button functionalities such as "Start Quiz", "Read General Information", "Exit", and others.
- Testing of screen transitions, ensuring proper navigation between screens.
- Validation of quiz functionality including category selection, difficulty level selection, quiz question display, and option selection.
- Verification of feedback mechanisms upon selecting quiz options and correctness display.
- Testing of exit mechanisms and ensuring proper closure of screens and the application.

Test Cases and Results

The testing was conducted based on a set of predefined test cases. Each test case was designed to validate specific functionalities and user interactions within the application. The test cases covered various scenarios from initial app launch to quiz completion and exit.

White Box testing:

The white box testing encompassed testing various methods and internal logic paths within the Learning Buddy application. It included unit testing of individual classes and components to ensure that each unit behaves as expected. The primary areas of testing included:

- Verification of getter and setter methods for the Category class.
- Validation of input validations such as handling empty strings, null values, and whitespace.
- Testing of database operations including table creation, data insertion, and retrieval.
- Examination of question and category handling functionalities within the application.

3. Test Cases and Results

The testing was conducted based on a series of detailed test cases designed to validate the internal behaviors of the application:

