Story/Task	Test Case ID	Test Case Description	Preconditions	Steps	Expected Result	Status
User Story 11: User Accounts & Syncing	TC-11-01	Test account creation with valid email and password	None	Navigate to the signup page. Enter a valid email and password. Glick "Sign Up".	Account is successfully created, and the user is redirected to the dashboard.	Pass
User Story 11: User Accounts & Syncing	TC-11-02	Test account syncing across devices	Account already created	Log in to the account on Device A. Perform some actions (e.g., complete a quiz). Log in on Device B.	Progress and preferences are consistent across devices.	Fail
User Story 12: Adaptive Study Paths	TC-12-01	Test ML-based study path adjustment	User has completed a sufficient number of quizzes	Complete quizzes with varying results. Observe the recommended study path.	The study path dynamically adjusts based on long-term trends and preferences.	Pass
User Story 12: Adaptive Study Paths	TC-12-02	Test preference-based content adaptation	User has updated preferences	Update preferences in the settings. Observe the changes in recommended content.	Recommendations align with updated preferences.	Pass
Iser Story 13: Reminders for Spaced Repetition & Recommendations	TC-13-01	Test spaced repetition notification	Spaced repetition content exists for the user	Enable notifications in the app. Wait for the scheduled reminder. Observe the notification.	User receives a notification for spaced repetition.	Fail
Iser Story 13: Reminders for Spaced Repetition & Recommendations	TC-13-02	Test recommendation notification	Recommendations available	Enable notifications in the app. Wait for the scheduled reminder. Observe the notification.	User receives a personalized recommendation notification.	Pass
User Story 14: Learning History	TC-14-01	Test access to learning history	User has completed quizzes or read articles	Navigate to the learning history page. Observe displayed data.	History includes completed articles, quizzes, scores, and time spent.	Pass
User Story 14: Learning History	TC-14-02	Test accurate history display	Multiple articles/quizzes completed	Complete multiple articles and quizzes. Verify the accuracy of history data.	All activities are accurately displayed in the history.	Pass
User Story 15: Adaptive Feedback Based on Trends	TC-15-01	Test feedback based on performance trends	Sufficient data exists for trend analysis	Complete multiple quizzes. Observe the feedback provided in the dashboard or after quizzes.	Feedback reflects long-term trends and offers actionable insights.	Fail
Technical Story 9: User Authentication	TC-09-01	Test login functionality	Account exists	Navigate to the login page. Enter valid credentials. Click "Log In".	User successfully logs in and is redirected to the dashboard.	Pass
Technical Story 9: User Authentication	TC-09-02	Test password recovery	Account exists	Navigate to the "Forgot Password" page. Enter registered email. Submit the form.	Password recovery email is sent to the user.	Pass
User Story 9: Targeted Feedback on Quizzes	TC-09-01	Test detailed feedback for correct answers	Quiz completed	Answer questions in a quiz. Observe feedback for correct answers.	Feedback explains why the answer is correct.	Pass
User Story 9: Targeted Feedback on Quizzes	TC-09-02	Test detailed feedback for incorrect answers	Quiz completed	Answer questions in a quiz. Observe feedback for incorrect answers.	Feedback explains why the answer is incorrect and provides resources.	Pass
User Story 10: Dynamic Content Adjustment	TC-10-01	Test difficulty adjustment based on user performance	User has completed quizzes	Complete quizzes with good scores. Observe the next recommended content.	Recommended content increases in difficulty for high scores.	Pass
User Story 10: Dynamic Content Adjustment	TC-10-02	Test content simplification for struggling users	User has performed poorly in quizzes	Complete quizzes with low scores. Observe the next recommended content.	Simplified or review content is recommended.	Pass