FUNCTIONAL TESTING MATRIX

Application Development: Mindstack

1. AUTHENTICATION & USER MANAGEMENT

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-AUTH-001	User Registration	Register with valid credentials	Account created, redirected to dashboard	Account created, redirected to dashboard	PASSED	MARCV.
TC-AUTH-002	User Registration	Register with existing email	Error: "Email already exists"	Error: "Email already exists"	PASSED	MARCV
TC-AUTH-003	User Registration	Register with weak password	Password strength validation error	Password strength validation error	PASSED	MARCV.
TC-AUTH-004	User Login	Login with correct credentials	Authenticated, JWT generated, dashboard loaded	Authenticated, JWT generated, dashboard loaded	PASSED	MARCV.
TC-AUTH-005	User Login	Login with wrong password	Error: "Invalid password"	Error: "Invalid password"	PASSED	MARCV.
TC-AUTH-006	User Login	Login with non-existent	Error: "Email not found"	Error: "Email not found"	PASSED	MARCV.

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
		email				
TC-AUTH-007	Forgot Password	Initiate password reset	Reset password OTP sent to email	Reset password OTP sent to email	PASSED	MARCV.
TC-AUTH-008	Reset Password	Reset using valid OTP	Password updated successfully	Password updated successfully	PASSED	MARCV.
TC-AUTH-009	Reset Password	Password mismatch	Error shown	Error shown	PASSED	MARCV.
TC-AUTH-010	User Profile	Fetch current user	User data returned	User data returned	PASSED	MARCV.
TC-AUTH-011	User Profile	View other user profile	Profile + milestone displayed	Profile + milestone displayed	PASSED	MARCV.

2. FLASHCARD MANAGEMENT

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-FC-001	Flashcard Set	Create with valid details	Set created with ID & slug	Set created with ID & slug	PASSED	MARCV.
TC-FC-002	Flashcard Set	Empty title	Disabled Button	Disabled Button	PASSED	MARCV

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-FC-003	Flashcard Set	Create public set	Public & filterable	Public & filterable	PASSED	MARCV.
TC-FC-004	Flashcard Set	Create private set	Visible only to creator	Visible only to creator	PASSED	MARCV.
TC-FC-005	Flashcard Set	View by ID	Full set loaded	Full set loaded	PASSED	MARCV.
TC-FC-006	Flashcard Set	View by slug	Set retrieved	Set retrieved	PASSED	MARCV.
TC-FC-007	Flashcard Set	Get user sets	Paginated list returned	Paginated list returned	PASSED	MARCV.
TC-FC-008	Flashcard Set	Get public sets	Only public sets shown	Only public sets shown	PASSED	MARCV
TC-FC-009	Flashcard Set	Update details	Set updated	Set updated	PASSED	MARCV.
TC-FC-010	Flashcard	Add flashcard	Flashcard added	Flashcard added	PASSED	MARCV.
TC-FC-011	Flashcard	Update flashcard	Content updated	Content updated	PASSED	MARCV.
TC-FC-012	Flashcard	Delete flashcard	Flashcard removed	Flashcard removed	PASSED	MARCV.
TC-FC-013	Flashcard Set	Delete set	Set & flashcards deleted	Set & flashcards deleted	PASSED	MARCV.
TC-FC-014	Flashcard Set	Publish set	Set filterable	Set filterable	PASSED	MARCV

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-FC-015	AI Suggestion	Generate suggestions with valid title	5 relevant questions generated	5 relevant questions generated	PASSED	MARCV.
TC-FC-016	AI Suggestion	Generate suggestions without title	Disabled Button	Disabled Button	PASSED	MARCV.
TC-FC-017	AI Suggestion	Generate suggestions with title only	Questions generated using title context	Questions generated using title context	PASSED	MARCV.
TC-FC-018	AI Suggestion	Generate suggestions with title	Questions generated	Questions generated	PASSED	MARCV.
TC-FC-019	AI Suggestion	Invalid API key / API error	Error: API connection failed message	Error: API connection failed message	PASSED	MARCV.
TC-FC-020	AI Suggestion	Close suggestions modal	Modal closes, suggestions cleared	Modal closes, suggestions cleared	PASSED	MARCV.
TC-FC-021	AI Suggestion	Loading state during generation	Spinner and loading message displayed	Spinner and loading message displayed	PASSED	MARCV.
TC-FC-022	AI Suggestion	View generated suggestions	5 numbered questions displayed in	5 numbered questions displayed in	PASSED	MARCV.

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
			modal	modal		

3. QUIZ MANAGEMENT

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-QZ-001	Quiz Set	Create MCQ quiz	Quiz created	Quiz created	PASSED	MARCV.
TC-QZ-002	Quiz Set	Create Identification quiz	Quiz created	Quiz created	PASSED	MARCV.
TC-QZ-003	Quiz Set	Public quiz	Accessible to others	Accessible to others	PASSED	MARCV.
TC-QZ-004	Quiz Set	Private quiz	Creator-only access	Creator-only access	PASSED	MARCV.
TC-QZ-005	Quiz Set	View by ID	Quiz loaded	Quiz loaded	PASSED	MARCV.
TC-QZ-006	Quiz Set	View by slug	Quiz retrieved	Quiz retrieved	PASSED	MARCV
TC-QZ-007	Quiz Set	Get user quizzes	List returned	List returned	PASSED	MARCV.
TC-QZ-008	Quiz Set	Get public quizzes	Public quizzes only	Public quizzes only	PASSED	MARCV.
TC-QZ-009	Quiz Set	Update quiz	Quiz updated	Quiz updated	PASSED	MARCV.

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-QZ-010	Quiz Question	Add question	Question added	Question added	PASSED	MARCV.
TC-QZ-011	Quiz Question	Update question	Question updated	Question updated	PASSED	MARCV.
TC-QZ-012	Quiz Question	Delete question	Question removed	Question removed	PASSED	MARCV
TC-QZ-013	Quiz Set	Delete quiz	Quiz deleted	Quiz deleted	PASSED	MARCV.
TC-QZ-014	AI Suggestion	Generate suggestions with valid title	5 relevant questions generated	5 relevant questions generated	PASSED	MARCV.
TC-QZ-015	AI Suggestion	Generate suggestions without title	Disabled Button	Disabled Button	PASSED	MARCV.
TC-QZ-016	AI Suggestion	Generate suggestions with title only	Questions generated using title context	Questions generated using title context	PASSED	MARCV.
TC-QZ-017	AI Suggestion	Generate suggestions with title & description	Questions generated using title & description	Questions generated using title & description	PASSED	MARCV.
TC-QZ-018	AI Suggestion	Invalid API key / API error	Error: API connection failed message	Error: API connection failed message	PASSED	MARCV.
TC-QZ-	AI	Close	Modal	Modal	PASSED	MARCV.

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
019	Suggestion	suggestions modal	closes, suggestions cleared	closes, suggestions cleared		
TC-QZ-020	AI Suggestion	Loading state during generation	Spinner and loading message displayed	Spinner and loading message displayed	PASSED	MARCV.
TC-QZ-021	AI Suggestion	View generated suggestions	5 numbered questions displayed in modal	5 numbered questions displayed in modal	PASSED	MARCV.

4. QUIZ ATTEMPTS & SCORING

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-QA-001	Quiz Attempt	Submit quiz	Score calculated	Score calculated	PASSED	MARCV.
TC-QA-002	Quiz Attempt	All correct answers	Score	Score	PASSED	MARCV.
TC-QA-003	Quiz Attempt	Partial correct	Correct Score	Correct Score	PASSED	MARCV
TC-QA-004	Quiz Attempt	View attempt	Attempt details shown	Attempt details shown	PASSED	MARCV
TC-QA-005	Quiz Attempt	Get user attempts	Attempts listed	Attempts listed	PASSED	MARCV
TC-QA-	Quiz	Get quiz	Attempts	Attempts	PASSED	MARCV

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
006	Attempt	attempts	per quiz	per quiz		
TC-QA-008	Quiz Attempt	Delete attempt	Attempt removed	Attempt removed	PASSED	MARCV

5. COMMUNITY & POSTS

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-POST-001	Create Post	Share flashcard set	Post links to flashcard	Post links to flashcard	PASSED	MARCV.
TC-POST-002	Create Post	Share quiz	Post links to quiz	Post links to quiz	PASSED	MARCV.
TC-POST-003	View Posts	Load community feed	Posts displayed	Posts displayed	PASSED	MARCV.
TC-POST-004	Filter by category	Filter by category	Filtered results shown	Filtered results shown	PASSED	MARCV.
TC-POST-005	Published Posts	View published posts	Public posts shown	Public posts shown	PASSED	MARCV.
TC-POST-006	Update Post	Edit content	Post updated	Post updated	PASSED	MARCV.
TC-POST-007	Delete Post	Delete post	Post removed	Post removed	PASSED	MARCV.
TC-POST-08	Unpublish Post	Unpublish post	Post becomes	Post becomes	PASSED	MARCV.

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
			private	private		
TC-POST-09	Like Post	Like post	Like count increased	Like count increased	PASSED	MARCV.
TC-POST-010	Unlike Post	Remove like	Like removed	Like removed	PASSED	MARCV.
TC-POST-011	Dislike Post	Dislike post	Dislike registered	Dislike registered	PASSED	MARCV.

6. COMMENTS & REPLIES

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-COMM-001	Comment	Add comment	Comment displayed	Comment displayed	PASSED	MARCV.
TC-COMM-002	Comment	Empty comment	Disabled Button	Disabled Button	PASSED	MARCV.
TC-COMM-003	Reply	Reply to comment	Nested reply shown	Nested reply shown	PASSED	MARCV.
TC-COMM-004	Comments	Load comments	All comments shown	All comments shown	PASSED	MARCV.
TC-COMM-005	Comment	Get by ID	Comment retrieved	Comment retrieved	PASSED	MARCV.
TC-COMM-	Comment	User	User comment	User comments	PASSED	MARCV.

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
006		comments	s listed	listed		
TC-COMM-007	Comment	Update comment	Comment updated	Comment updated	PASSED	MARCV.
TC-COMM-08	Comment	Delete comment	Comment removed	Comment removed	PASSED	MARCV.
TC-COMM-09	Comment	Like comment	Like counted	Like counted	PASSED	MARCV.
TC-COMM-010	Comment	Dislike comment	Dislike counted	Dislike counted	PASSED	MARCV.
TC-COMM-011	Comment	Profanity used	Text filtered	Text filtered	PASSED	MARCV

7. DASHBOARD & USER PROFILE

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-DASH-001	Dashboard	Load dashboard	Stats displayed	Stats displayed	PASSED	MARCV.
TC-DASH-002	Dashboard	View stats	Counts visible	Counts visible	PASSED	MARCV.
TC-DASH-003	Dashboard	Recent activity	Activity listed	Activity listed	PASSED	MARCV.
TC-DASH-004	Dashboard	Create flashcard	Modal opens	Modal opens	PASSED	MARCV.
TC-DASH-005	Dashboard	Create quiz	Modal opens	Modal opens	PASSED	MARCV.

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-DASH-006	Profile	View own profile	Profile shown	Profile shown	PASSED	MARCV.
TC-DASH-007	Profile	View other user	Public info shown	Profile shown	PASSED	MARCV.
TC-DASH-008	Profile	Edit profile	Profile updated	Profile updated	PASSED	MARCV.

8. NOTIFICATIONS & ALERTS

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-NOTIF-001	Notifications	Open page	Notifications loaded	Notifications loaded	PASSED	MARCV.
TC-NOTIF-002	Notifications	View list	All notifications shown	All notifications shown	PASSED	MARCV.
TC-NOTIF-003	Notifications	Mark as read	Status updated	Status updated	PASSED	MARCV.
TC-NOTIF-004	Alerts	Post alert	Notification created	Notification created	PASSED	MARCV.
TC-NOTIF-005	Alerts	Comment alert	Notification sent	Notification sent	PASSED	MARCV.

9. CONTACT & SUPPORT

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-CONTACT-001	Contact	Submit valid form	Message sent	Message sent	PASSED	MARCV.
TC-CONTACT-002	Contact	Missing fields	Validation error	Validation error	PASSED	MARCV.
TC-CONTACT-003	Contact	Invalid email	Email error	Email error	PASSED	MARCV.

10. UI/UX & LOADING STATES

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-UX-001	Loader	Dashboard loading	Spinner visible	Spinner visible	PASSED	MARCV.
TC-UX-002	Loader	Community loading	Spinner visible	Spinner visible	PASSED	MARCV.
TC-UX-003	Loader	Quiz loading	Spinner visible	Spinner visible	PASSED	MARCV.
TC-UX-004	Loader	Flashcards loading	Spinner visible	Spinner visible	PASSED	MARCV.
TC-UX-005	Loader	Notification loading	Spinner visible	Spinner visible	PASSED	MARCV.
TC-UX-005	Alert	Create post	Success alert	Success alert	PASSED	MARCV.

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-UX-006	Alert	Edit post	Success alert	Success alert	PASSED	MARCV.
TC-UX-007	Alert	Delete post	Success alert	Success alert	PASSED	MARCV.
TC-UX-008	Alert	Add comment	Success alert	Success alert	PASSED	MARCV.
TC-UX-009	Alert	Edit comment	Success alert	Success alert	PASSED	MARCV.
TC-UX-010	Alert	Like/Dislike	Reaction alert	Success alert	PASSED	MARCV.
TC-UX-011	Modal	Create post	Modal works	Modal works	PASSED	MARCV.
TC-UX-012	Modal	Post details	Modal shows data	Modal shows data	PASSED	MARCV.
TC-UX-013	Sidebar	Toggle sidebar	Layout adjusts	Layout adjusts	PASSED	MARCV.

11. SECURITY & VALIDATION

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-SEC-001	JWT	Valid token	Request allowed	Request allowed	PASSED	MARCV.
TC-SEC-	JWT	Expired	Redirect	Redirect	PASSED	MARCV.

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
002		token	to landing	to landing		
TC-SEC-003	CORS	Cross-origin request	Allowed	Allowed	PASSED	MARCV.
TC-SEC-004	Validation	Invalid input	Submission blocked	Submission blocked	PASSED	MARCV.
TC-SEC-005	Profanity	Profane content	Cleaned	Cleaned	PASSED	MARCV.
TC-SEC-006	Authorization	Edit without ownership	Access denied	Access denied	PASSED	MARCV.
TC-SEC-007	Authorization	Delete without ownership	Access denied	Access denied	PASSED	MARCV.

12. FILTERING

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-FILTER-001	Filter	Category filter	Filter applied	Filter applied	PASSED	MARCV.
TC-FILTER-002	Filtering	No results	No posts found. Be the first to create one!	No posts found. Be the first to create one!	PASSED	MARCV.

13. INTEGRATION TESTS

Test Case No.	Feature	Test Scenario	Expected Result	Actual Result	Remarks	Tester
TC-INT-001	Workflow	Create & share	End-to-end success	End-to-end success	PASSED	MARCV.
TC-INT-002	Navigation	Multi-page flow	Data persists	Data persists	PASSED	MARCV.
TC-INT-003	Auth Guard	Protected route	Redirected	Redirected	PASSED	MARCV.

TEST SUMMARY METRICS

Metric	Value
Total Test Cases	125
Passed	125
Failed	0
Pass Rate	100%
Testing Date	12/27/25
Tested By	MARCV