Project Name	SmartSurvey – Automated Survey Generation & Intelligent Data Analysis
Stage	Sprint 3
Time Duration	04/11/2025 – 01/12/2025
Project Code	C1SE.09
Test Environment Setup Description	Web App (Desktop) + Mobile Emulator (Chrome DevTools)

Test Result	PASS
	FAIL
	SKIPPED
	NOT IMPLEMENTED

No	Name Test Case	Create Date	Total	Test case pass	Test case fail
1	ChatBot	27/11/2025	22	20	2
2	Export_Report	14/11/2025	21	18	3
3	Admin_User_Management	19/11/2025	20	17	3
4	RAGPipeline	28/11/2025	20	18	2

ChatBot

Status	Task
Pass	20
Fail	2

Test Case I	Test Case Name	Data	Test steps	Desired results	Actual results	Priority	Responsible	Status
CB-001	Ask summary (variant 1)11:11D282:1	Survey S2 (>= 21 responses)	1) Login as Creator. 2) Dashboard → Survey S2. 3) Open 'Chatbot' tab. 4) Prompt: 'Tóm tắt nổi bật trong 3 câu' → Enter.	Bot returns concise summary with totals and links.	[10:22:04] Reply after ~2.1s. Total replies: 22. Provide 'Statistics' and 'Topic' links; no major error detected.	High	Tu Nguyen Tran Anh	Pass
CB-002	Chart via chatbot for Q3	Survey S3 with MCQ Q3	1) Login as Creator. 2) Open Survey S3 → Chatbot. 3) Prompt: 'Vẽ biểu đồ cột cho Q3 theo số lượng'. 4) Click 'Render chart'.	Column chart renders; tooltips show counts; legend matches.	Column chart displays 3 columns A/B/C; tooltips respectively: A=18, B=11, C=9. Legend matches; no duplicate label errors.	High	Phuong Nguyen Minh	Pass
CB-003	Follow-up relative time	Prev asked 'yesterday'	1) Login as Creator. 2) Open previous conversation. 3) Ask: 'còn hôm nay thì sao?'.	Answer switches to today's data.	The answer changes to the range 'Today 00:00→current'; note the time with the Asia/Ho_Chi_Minh time zone.	Medium	Hau Vo Thanh	Pass
CB-004	Network loss & retry	DevTools Offline→Online	1) Login → Survey S1 → Chatbot. 2) Switch Offline and send question. 3) See banner; switch Online. 4) Click 'Retry'.	Friendly error then single successful resend.	When offline, a red banner 'Lost Connection' appears. Once online, press Retry to send only once; no duplicate replies.	High	Thien Nguyen Ngoc	Pass
CB-005	Timeout banner	Simulate backend delay >15s	1) Login → Survey S2 → Chatbot. 2) Send heavy query. 3) Wait 20s.	Timeout banner with 'Retry'; spinner stops.	After 15s, timeout banner + Retry button appears; spinner stops; Retry gives result after 3.4s.	High	Phuc Hoang Ngoc	Pass
CB-006	Cancel long answer	Normal network	1) Login → Survey S3 → Chatbot. 2) Ask: 'Liệt kê toàn bộ nhận xét mở'. 3) Click 'Cancel' within 3s.	Request aborted; thread marked 'Canceled'.	Press Cancel at 2 seconds: stream stops immediately; log shows 'REQUEST_ABORTED'; no junk text.	Medium	Thien Nguyen Ngoc	Pass
CB-007	History persists after refresh	Two questions asked	1) Login → Survey S4 → Chatbot. 2) Ask 2 questions. 3) Refresh page and reopen.	Messages remain with correct timestamps.	After F5, history still has 2 news; time-local 14:03, 14:04; order is not reversed.	Medium	Tu Nguyen Tran Anh	Pass
CB-008	RBAC private survey	Login as User B (not owner of S2)	1) Login as User B. 2) Open Survey S2 → Chatbot. 3) Ask any question.	Access denied; no data leakage.	UI shows 'Access denied' (403). Does not reveal survey title, total response or owner.	High	Phuong Nguyen Minh	Pass
CB-009	Bilingual prompt VI+EN	Survey S1	1) Login → Survey S1 → Chatbot. 2) Ask: 'What is % of option B tuần này? explain briefly'.	Bot parses bilingual query; returns % + short explanation.	Bot understands query; returns 'Option B = 42%' + short English explanation; Vietnamese accents display correctly.	Low	Hau Vo Thanh	Pass
CB-010	Performance SLA first answer	Warm index	1) Login → Survey S5 → Chatbot. 2) Ask typical question; measure time.	First answer ≤5s; else info banner.	P95 response time = 1.92s; below SLA 5s.	Medium	Phuc Hoang Ngoc	Pass
CB-011	Ask summary (variant 11)	Survey S5 (>= 31 responses)	1) Login as Creator. 2) Dashboard → Survey S5. 3) Open 'Chatbot' tab. 4) Prompt: 'Tóm tắt nổi bật trong 4 câu' → Enter.	Bot returns concise summary with totals and links.	[10:22:04] Reply after ~2.1s. Total responses: 25. Provide 'Stats' and 'Topics' links; no spelling errors detected.	High	Hau Vo Thanh	Pass
CB-012	Chart via chatbot for Q1	Survey S3 with MCQ Q1	1) Login as Creator. 2) Open Survey S3 → Chatbot. 3) Prompt: 'Vẽ biểu đồ cột cho Q1 theo số lượng'. 4) Click 'Render chart'.	Column chart renders; tooltips show counts; legend matches.	Column chart displays 3 columns A/B/C; tooltips respectively: A=18, B=11, C=9. Legend matches; no duplicate label errors.	High	Thien Nguyen Ngoc	Pass
CB-013	Code-switching prompt handling	Survey S1 with EN+VI responses	1) Login as Creator. 2) Open Survey S1 → Chatbot. 3) Ask: 'Top keywords (EN) + tóm tắt (VI)'. 4) Verify one mixed-language answer.	One answer with English keywords + Vietnamese summary; readable formatting	Returned in ~2.3s. Keywords EN + summary VI; layout readable; no policy issues.	Medium	Tu Nguyen Tran Anh	Pass
CB-014	Streaming partial answer visible	S2 (≥100 responses)	1) Login as Creator. 2) Open S2 → Chatbot. 3) Ask heavy analysis; watch stream. 4) Verify stream equals final content.	Progressive streaming, no UI freeze; final text = streamed content	Streaming visible; UI responsive; final message equals stream.	Low	Phuong Nguyen Minh	Pass
CB-015	Stop generating mid-answer	S3	1) Login as Creator. 2) Open S3 → Chatbot. 3) Ask long list; click Stop mid-stream. 4) Verify "Stopped" and Continue works.	Stream stops immediately; message flagged "stopped"; can Continue/new prompt	Stopped <200ms; "Stopped by user"; Continue works.	Medium	Hau Vo Thanh	Pass
CB-016	Context carry-over (3 hops)	S1 thread with 2 prior Q&A	1) Login as Creator. 2) Open S1 → Chatbot (existing thread). 3) Ask follow-up referencing earlier turns. 4) Verify no re-asking for context.	Bot references both prior answers; no request to restate context	Used prior facts correctly; no context re-ask.	High	Phuong Nguyen Minh	Pass
CB-017	Inline markdown table rendering	S4 with choice counts	1) Login as Creator. 2) Open S4 → Chatbot. 3) Ask to render markdown table of counts %. 4) Verify headers & numbers vs Stats.	Markdown table renders; numbers match Stats	Percentages off (Option C –2%); header alignment missing.	Medium	Thien Nguyen Ngoc	Fail

Test Case I	Test Case Name	Data	Test steps	Desired results	Actual results	Priority	Responsible	Status
CB-018	Autosuggestion pick list	S5	1) Login as Creator. 2) Open S5 → Chatbot. 3) Type "top 3", pick suggestion. 4) Verify result fits intent.	Suggestion expands into full prompt; result fits selected intent	Inserted template; matched "Top 3"; no duplicates.	Low	Tu Nguyen Tran Anh	Pass
CB-019	Prompt-injection guardrail	S1	1) Login as Creator. 2) Open S1 → Chatbot. 3) Ask for private emails. 4) Verify refusal & safety notice.	Bot declines with safety notice; no PII revealed	Policy notice; no PII; logged to safety telemetry.	High	Hau Vo Thanh	Pass
CB-020	Rate-limit backoff UI	S2	1) Login as Creator. 2) Open S2 → Chatbot. 3) Send 6 queries within 30s. 4) Verify banner/disable/queue.	"Too many requests" banner; input temporarily disabled; no infinite queue	No banner; input enabled; 3 parallel duplicates.	Medium	Thien Nguyen Ngoc	Fail
CB-021	Enter / Shift+Enter behavior	S3	1) Login as Creator. 2) Open S3 → Chatbot. 3) Type with Shift+Enter; then press Enter. 4) Verify newline vs send.	Shift+Enter doesn't send; Enter sends; formatting preserved	Newline works; Enter sends; formatting preserved.	Low	Tu Nguyen Tran Anh	Pass
CB-022	Citation de-duplication	S4 (many identical sources)	1) Login as Creator. 2) Open S4 → Chatbot. 3) Ask with citations; expand list. 4) Verify duplicates collapsed.	Citations list shows unique items only; duplicates collapsed	Unique list; duplicates collapsed; order stable.	Medium	Phuong Nguyen Minh	Pass

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Export_Report

Status	Task
Pass	18
Fail	3

Test Case ID	Test Case Name	Data	Test steps	Desired results	Actual results	Priority	Responsible	Status
EX-001	Export PDF default (v1)	Survey S2 with analysi	1) Login as Creator. 2) Open Survey S2 → Report. 3) Export → PDF. 4) Open file.	PDF opens; header/footer; charts/totals match.	PDF opens OK (2 pages). Header has survey name, footer page number. UI Match Match Numb	High	Tu Nguyen Tran Anh	Pass
EX-002	Export Excel with 3 she	>=5 responses	1) Login → Survey S1 → Report. 2) Export → Excel → open workbook.	Raw/Stats/ChartsData present; headers/types corre	XLSX file includes 3 sheets: Raw (125 rows), Stats (12 indexes), ChartsData (36 data cells). Corre	High	Phuong Nguyen Minh	Pass
EX-003	Date filter respected	Responses 14d; filter 7	1) Login → Survey S2 → Report. 2) Set 'Last 7 days'. 3) Export PDF & Excel.	Exports only last 7 days; numbers match UI.	Date filter not applied to export file; number larger than UI.	Medium	Hau Vo Thanh	Fail
EX-004	Permission blocks expo	Login as User B	1) Login as User B. 2) Open Survey S3 → Report. 3) Export → PDF.	403 or friendly message; no file.	Server returned 403 JSON {{code:'FORBIDDEN'}}; browser did not load any file.	High	Thien Nguyen Ngoc	Pass
EX-005	Branding / cover page	Branding ON	1) Login → Settings → enable branding. 2) S1 → Report → Export PDF. 3) Verify cover + logo.	Cover shows name/date; logo crisp; no overlap.	Cover page with logo 180×180px; good DPI; no title cover; size ~1.1MB.	Low	Phuc Hoang Ngoc	Pass
EX-006	Large dataset progress	>=10k responses	1) Login → Survey S4 → Report. 2) Export Excel; monitor progress UI.	Progress indicator; UI responsive; success toast.	Progress bar runs 0→100%; UI does not freeze; total time 41s; memory limit not exceeded.	Medium	Thien Nguyen Ngoc	Pass
EX-007	Vietnamese diacritics C	VN text present	1) Login → Survey S1 → Report.2) Expo	All diacritics correct; no tofu boxes.	Vietnamese accents display correctly in PDF & Excel; fallback font is not 'tofu'.	Low	Tu Nguyen Tran Anh	Pass
EX-008	Exclude hidden questic	2 hidden questions	1) Login → Survey S2 → Report.2) Togg	Hidden questions absent; formulas adjusted.	Hidden questions do not appear in Raw/Stats/ChartsData; the SUM formula references the nev	High	Phuong Nguyen Minh	Pass
EX-009	UI↔Excel numbers m	UI totals available	1) Login → Survey S5 → Report. 2) Note totals & counts. 3) Export Excel; check 'Stats'.	Excel equals UI values.	**UI: A=60, B=40, C=20; Excel Stats displays correctly 60/40/20.**	High	Hau Vo Thanh	Pass
EX-010	File naming convention	S1	1) Login → Survey S1 → Report. 2) Export PDF & Excel.	Filename 'survey_<id>_<yyyy-mm-dd>.pdf/xlsx'.	File name: survey_S1_2025-11-13.pdf/.xlsx; conforms to convention.	Low	Phuc Hoang Ngoc	Pass
EX-011	Export PDF default (v1	Survey S6 with analysi	1) Login as Creator. 2) Open Survey S6 → Report. 3) Export → PDF. 4) Open file.	PDF opens; header/footer; charts/totals match.	PDF opens OK (2 pages). Header named survey, footer page number. Chart data matches UI 10	High	Hau Vo Thanh	Pass
EX-012	Landscape PDF orientation	S1	1) Login as Creator. 2) Open S1 → Report. 3) Export → PDF (Landscape). 4) Open file, check pages.	PDF is landscape; charts not clipped; smart page breaks	Landscape; charts visible; breaks correct.	Low	Thien Nguyen Ngoc	Pass
EX-013	Custom date format in Excel	S2 (date fields)	1) Login as Creator. 2) S2 → Report. 3) Export → Excel. 4) Check date columns = Date, yyyy-mm-dd.	Dates use yyyy-mm-dd; no text-typed dates	Date type; yyyy-mm-dd; no strings.	Medium	Tu Nguyen Tran Anh	Pass

Test Case ID	Test Case Name	Data	Test steps	Desired results	Actual results	Priority	Responsible	Status
EX-014	Timezone conversion correctness	S3 (UTC→Asia/Bangkok)	1) Login as Creator. 2) Set UI TZ = Asia/Bangkok. 3) Export PDF+Excel. 4) Compare timestamps with UI.	Timestamps reflect Asia/Bangkok; match UI	All shifted to UTC+7; match UI.	High	Phuong Nguyen Minh	Pass
EX-015	Column ordering matches spec	S4	1) Login as Creator. 2) S4 → Report. 3) Export Excel. 4) Compare headers with spec v1.2.	Columns appear in documented order; no unexpected columns	Order = spec; headers match; no extra.	Medium	Hau Vo Thanh	Pass
EX-016	Rounding rules for percentages	S1	1) Login as Creator. 2) Export Excel. 3) Sum option % per question. 4) Compare with UI totals.	Rounding consistent; totals = 100%	Excel Q2 = 101%; UI = 100%; rounding rule mismatch.	Medium	Phuong Nguyen Minh	Fail
EX-017	Long text wrapping in PDF	S2 (long comments)	1) Login as Creator. 2) Export PDF. 3) Open comments pages. 4) Check wrap/overlap.	Long comments wrap; no overlap/truncation	Wrapped cleanly; no overlap.	Low	Thien Nguyen Ngoc	Pass
EX-018	Hyperlink preservation in Excel	S3 (links)	1) Login as Creator. 2) Export Excel. 3) Click sample links. 4) Compare text vs URL.	Hyperlinks preserved/clickable; text intact	Links clickable; text intact.	Low	Tu Nguyen Tran Anh	Pass
EX-019	Zero-response edge case	S5 (0 responses)	1) Login as Creator. 2) Export PDF+Excel. 3) Open Stats/ChartsData. 4) Check for NaN/#DIV/0!.	Empty-state text; no divide-by-zero	PDF OK; Excel has NaN and #DIV/0!.	High	Hau Vo Thanh	Fail
EX-020	Watermark off when disabled	Global OFF	1) Login as Creator. 2) Export any report to PDF. 3) Review pages. 4) Confirm no watermark.	No watermark present; no stale cache watermark	No watermark; cache not reused.	Low	Thien Nguyen Ngoc	Pass
EX-021	Filter by respondent attribute	S1 (role=student)	1) Login as Creator. 2) Apply filter role=student. 3) Export PDF+Excel. 4) Compare counts with UI.	Exported counts reflect attribute filter; match UI	Exports match UI; no leakage.	High	Tu Nguyen Tran Anh	Pass

Admin_User_Management

Status	Task
Pass	17
Fail	3

Test Case ID	Test Case Name	Data	Test steps	Desired results	Actual results	Priority	Responsible	Status
AU-00110:10	View active users with pagination	>=30 users	1) Login as Admin. 2) Admin → Users. 3) Toggle 'Active only'. 4) Go to page 2.	Only active users; pagination stable; counts correct.	Page 2 shows 10/25 active users; total 3 pages; no inactive users found.	Medium	Tu Nguyen Tran Anh	Pass
AU-002	Create user validation (invalid)	email=foo@bar, pwd=12345	1) Login Admin → Users. 2) Click 'New user'. 3) Enter invalid email & weak pwd. 4) Submit.	Validation messages; no record created.	UI shows error: 'Invalid email' + 'Password too weak'; no record created.	High	Phuong Nguyen Minh	Pass
AU-003	Deactivate / Reactivate user	User X active	1) Login Admin → Users. 2) Deactivate X → Confirm. 3) Try login as X. 4) Reactivate X.	X cannot login while inactive; status toggles.	User X switched to 'Inactive'; login returned 401; re-activate successful after 1 refresh.	Medium	Hau Vo Thanh	Pass
AU-004	Search & sort	keyword 'minh'	1) Login Admin → Users. 2) Search 'minh'. 3) Sort by 'Created date' DESC.	Filtered results; sort persists across pages.	Searching for 'minh' returns 3 results. Sort DESC by CreatedAt remains the same when changing pages.	Medium	Thien Nguyen Ngoc	Pass
AU-005	RBAC block /admin	Login as non-admin	1) Login as regular user. 2) Navigate to /admin via URL.	Access denied/redirect; no leakage.	Access to /admin is redirected to Dashboard; log records 1 denied event.	High	Phuc Hoang Ngoc	Pass
AU-006	Bulk deactivate 3 users	Select 3 of 5 active	1) Login Admin → Users. 2) Select 3 → Actions → Deactivate → Confirm.	Exactly 3 users updated; snackbar confirms.	User X switched to 'Inactive'; login returned 401; re-activate successful after 1 refresh.	Medium	Thien Nguyen Ngoc	Pass
AU-007	Invite user (expiry)	TTL=15 minutes	1) Login Admin → Users → 'Invite user'. 2) Enter email; send invite. 3) Open link after TTL.	Expired banner; 'Resend invite' available.	Actual behavior is different from expectation (details attached log).	Medium	Tu Nguyen Tran Anh	Fail
AU-008	Audit log on role change	Audit enabled	1) Login Admin → Users. 2) Change role of Y to 'admin'. 3) Open Audit log page.	Audit entry with actor, timestamp, change diff.	Audit has records: actor=admin@..., before=member, after=admin, time=ISO8601.	Medium	Phuong Nguyen Minh	Pass
AU-009	Soft delete & verify hidden	User Z exists	1) Login Admin → Users. 2) Delete Z → Confirm. 3) Search Z by email.	Z marked deleted; cannot login; visible only with 'Include deleted'	User Z has deleted=true flag; cannot log in; only visible when 'Include deleted' is enabled.	Medium	Hau Vo Thanh	Pass
AU-010	No ghost records on refresh	—	1) Login Admin → Users → 'New user'. 2) Fill form but do not submit. 3) Refresh page.	No ghost record; optional unsaved-changes prompt.	Refresh does not create a new user; displays an 'Unsaved changes' pop-up before leaving the page.	Medium	Phuc Hoang Ngoc	Pass
AU-011	Password reset email flow	User exists	1) Login as Admin. 2) Users → pick user. 3) Click Send reset; open email link. 4) Set new password & login.	Reset email delivered; link valid; password updated	Delivered <10s; link valid; password changed; audit logged.	High	Hau Vo Thanh	Pass
AU-012	Account lock after failed logins	User X	1) Logout. 2) Try wrong password ×5. 3) Try again. 4) Check lock message.	Account locked per policy; unlock guidance shown	Locked after 5; guidance shown; timer started.	High	Thien Nguyen Ngoc	Pass
AU-013	Change email requires verification	User Y	1) Login as Admin. 2) Users → edit User Y email. 3) Open new inbox; click verify. 4) Confirm email updated.	Email changes only after verification	Verification sent; updated after link.	Medium	Tu Nguyen Tran Anh	Pass
AU-014	Import users CSV preview	CSV (20 users)	1) Login as Admin. 2) Users → Import. 3) Upload CSV. 4) Review preview/errors.	Preview rows + validation errors; no commit yet	20 rows shown; 2 invalid flagged; none created.	Low	Phuong Nguyen Minh	Pass
AU-015	Enable/disable 2FA	User Z	1) Login as Admin. 2) Toggle 2FA On for Z. 3) Log in as Z (OTP required). 4) Toggle Off and re-login.	2FA enforced when enabled; bypassed when disabled	OTP required when On; not required when Off.	Medium	Hau Vo Thanh	Pass
AU-016	Revoke sessions on deactivate	User X with active sessions	1) Login as Admin. 2) Deactivate User X. 3) Use X's old session on another tab. 4) Expect 401/forced logout.	All active sessions invalidated immediately	Old session valid ~10 min; APIs still succeed; no forced logout.	High	Phuong Nguyen Minh	Fail

Test Case ID	Test Case Name	Data	Test steps	Desired results	Actual results	Priority	Responsible	Status
AU-017	Pagination size change persists	Users list	1) Login as Admin. 2) Set page size=50. 3) Navigate away/back. 4) Confirm persists.	Page size preference persists	Preference kept at 50 across pages.	Low	Thien Nguyen Ngoc	Pass
AU-018	Custom columns saved per admin	Admin A	1) Login as Admin A. 2) Hide "Last login"; show "MFA". 3) Refresh page. 4) Confirm visibility persists.	Column visibility persists for that admin	Hidden columns remain hidden; pref stored.	Low	Tu Nguyen Tran Anh	Pass
AU-019	Export users list CSV	Users page	1) Login as Admin. 2) Filter Active only. 3) Export CSV; open file. 4) Check header + row count.	CSV has visible columns, UTF-8 header; counts match list	Missing header; ANSI encoding; row count off by 1.	Medium	Hau Vo Thanh	Fail
AU-020	Edit profile validation (names)	User W	1) Login as Admin. 2) Open User W. 3) Set name "John@@@123"; Save. 4) Confirm rejected.	Validation errors shown; no update persisted	Client/server reject; no change; error toast.	Medium	Thien Nguyen Ngoc	Pass

RAGPipeline

Status	Task
Pass	18
Fail	2

Test Case ID	Test Case Name	Data	Test steps	Desired results	Actual results	Priority	Responsible	Status
RAG-001	Ask AI (themes)	S1 has KB indexed	1) Login as Creator. 2) Open Survey S1 → 'Ask AI'. 3) Enter: 'Tóm tắt 3 chủ đề chính'. 4) Submit.	3 themes with counts; citations when available.	Returns 3 topics: 'Price'(42), 'Quality'(31), 'Delivery'(27); with 2 citations.	High	Tu Nguyen Tran Anh	Pass
RAG-002	Empty-state when no KB	Survey without KB	1) Login → Survey S2 → 'Ask AI'.	Empty-state banner; CTA to index KB.	Show 'KB not available' instruction box; 'Index now' button available; no API call.	Medium	Phuong Nguyen Minh	Pass
RAG-003	Switch KB v1→v2 and ask diff	Survey has KB v1 & v2	1) Login → Survey S3 → 'Ask AI'. 2) Select KB v2. 3) Ask: 'Điểm khác biệt chính?'	Answer references v2; badge shows 'KB v2'.	Badge 'KB v2' is shown; answers cite v2 documentation; there is a 'Switch back to v1' button.	Medium	Hau Vo Thanh	Pass
RAG-004	Backend 5xx → fallback	Simulate 5xx	1) Login → Survey S1 → 'Ask AI'. 2) Ask any question.	Error banner; Retry works; spinner not stuck.	Simulate 5xx → error banner; Retry after 1 operation; spinner is not stuck.	High	Thien Nguyen Ngoc	Pass
RAG-005	Citation link opens artifact	Answer cites PDF/CSV	1) Login → Survey S1 → 'Ask AI'. 2) Ask numeric question. 3) Click citation link.	New tab opens correct file; referrer policy applied.	Click the link to open the PDF file in a new tab; correct title; no referrer violation.	Low	Phuc Hoang Ngoc	Pass
RAG-006	Diacritics normalization	Query 'dịch vụ' vs 'dich vu'	1) Login → Survey S4 → 'Ask AI'. 2) Ask twice with/without diacritics.	Similar results; normalized tokens.	The results of the two queries 'service' and 'dich vu' are almost equivalent (difference in score	Medium	Thien Nguyen Ngoc	Pass
RAG-007	Client rate-limit handling	>N queries in 60s	1) Login → Survey S1 → 'Ask AI'. 2) Send 6 queries quickly.	Shows 'Too many requests'; input disabled briefly.	Send 6 quick requests → banner 'Too many requests' and lock input for 10s.	Medium	Tu Nguyen Tran Anh	Pass
RAG-008	Cancel long retrieval	Normal network	1) Login → Survey S1 → 'Ask AI'. 2) Trigger long query; click 'Cancel'.	Request canceled; UI idle; no memory leak.	Cancel stops the query; no more text chunks appear; CPU returns to idle.	Medium	Phuong Nguyen Minh	Pass
RAG-009	No KB → empty results contract	Survey without KB	1) Login → Survey S2 → 'Ask AI'. 2) Ask: 'Top 3 complaints?'	Helpful message; empty results; no crash.	Show 'No KB indexed'; empty payload; hint to build KB.	Medium	Hau Vo Thanh	Pass
RAG-010	Performance SLA first answer	Warm index	1) Login → Survey S5 → 'Ask AI'. 2) Ask typical question; time response.	First answer ≤5s; else info banner.	P95=1.6s, P99=2.8s; under SLA 5s.	Medium	Phuc Hoang Ngoc	Pass
RAG-011	Top-k tuning changes answer	S1 KB indexed	1) Login as Creator. 2) Ask with top-k=3. 3) Ask again with top-k=10. 4) Compare citations & narrative.	Answer shifts as recall widens; citations differ	top-k=10 adds two sources; narrative updated; consistent.	Medium	Hau Vo Thanh	Pass
RAG-012	Source filter: only policy docs	S2	1) Login as Creator. 2) Set filter=policy. 3) Ask numeric compliance. 4) Check citations list.	Citations only from policy docs	All citations from "policy"; none others.	High	Thien Nguyen Ngoc	Pass
RAG-013	Hallucination guardrail	No matching facts	1) Login as Creator. 2) Ask unsupported claim. 3) Read response. 4) Verify no fabrication.	Answer states lack of evidence; no fabrication	"Insufficient evidence" + guidance; no invented facts.	High	Tu Nguyen Tran Anh	Pass

Test Case ID	Test Case Name	Data	Test steps	Desired results	Actual results	Priority	Responsible	Status
RAG-014	Prompt template variables resolved	Global template	1) Login as Creator. 2) Use {{survey_id}} & {{date_range}} in prompt. 3) Send. 4) Inspect request/UI values.	Placeholders resolve to real values	Placeholders appear literally; template binding missing.	Low	Phuong Nguyen Minh	Fail
RAG-015	Cache warm-up after cold start	S3	1) Restart/ensure cold start. 2) Send query #1. 3) Send same query #2. 4) Compare latency.	Latency improves on second query	2.9s → 1.3s; answers identical.	Low	Hau Vo Thanh	Pass
RAG-016	Max answer length respected	Global limit	1) Login as Creator. 2) Ask very long list. 3) Reach limit. 4) Check for "Show more" & clean cut.	Answer truncates gracefully with "show more"	Cut mid-token; no "Show more"; broken sentence.	Medium	Phuong Nguyen Minh	Fail
RAG-017	Code block rendering in answer	Snippet present	1) Login as Creator. 2) Ask to show config snippet. 3) View block. 4) Click copy.	Monospace block with copy button	Monospace; copy works; no HTML-escape issues.	Low	Thien Nguyen Ngoc	Pass
RAG-018	Download CSV of findings	Button available	1) Login as Creator. 2) Run analysis. 3) Click Download CSV. 4) Compare rows/cols with UI.	CSV matches on-screen items 1:1	CSV matches counts; UTF-8; commas escaped.	Low	Tu Nguyen Tran Anh	Pass
RAG-019	Thumbs up/down feedback stored	Feedback widget	1) Login as Creator. 2) Rate an answer. 3) Refresh page. 4) Check persistence/analytics.	Feedback persists; analytics records signal	Thumbs-up persists; analytics captured.	Low	Hau Vo Thanh	Pass
RAG-020	Citation de-dup & ordering	S1 multiple matches	1) Login as Creator. 2) Open citations panel. 3) Review list. 4) Confirm de-dup & sort.	Unique citations sorted by relevance/recency	Duplicates merged; sorted by relevance→recency.	Medium	Thien Nguyen Ngoc	Pass