ArenaFlow
Manual Testing Plan

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Application: Badminton Tournament Manager (Court Daylight / Stadium Night)

This document covers the complete manual test scenarios for ArenaFlow including Authentication, Player & Team Management, Categories, Scheduling & Courts, Matches & Referee Scoring, Reports, and UI/Role-based access.

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1. Introduction

Application Overview: ArenaFlow is a badminton tournament management system that powers player/teams registration, category management, draw generation, scheduling & court assignment, live scoring by referees, and results publishing with role-based access.

Roles Covered: Admin, Referee, User (Player/Viewer).
Environments: Backend (Spring Boot + PostgreSQL + Flyway), Admin UI (React + MUI), User UI (React).
Assumptions: API base URL configured, seed data available (one tournament, categories), and accounts for each role.

2. Test Strategy

Scope: Functional verification across modules; role-based access; UI behaviors (forms, dialogs, DataGrid); basic non-functional checks (usability, performance sanity).
Entry Criteria: Deployable build available; DB migrations applied; smoke tests pass.
Exit Criteria: All high/critical defects closed; >95% scenario pass; sign-off completed.
Severity/Priority Matrix: Sev-1 (blocking), Sev-2 (major), Sev-3 (minor), Sev-4 (cosmetic).
Test Data: Admin user, Referee user, 10 players, 3 categories (MD/WD/XD), 4 courts, 2 blackout windows.

3. Module-wise Test Scenarios

3.1 Authentication & User Roles

TC ID	Scenario	Pre-conditions	Steps	Expected Result
UTH-01	Login with valid Admin credentials	Admin user exists; app URL reachable	Open login; enter valid email/password; submit	Dashboard loads; JWT stored; role=ADMIN
UTH-02	Login with invalid password	Valid user exists	Open login; enter valid email + wrong password; submit	Inline error appears; no session created
UTH-03	Referee restricted from Admin-only pages	Login as REFEREE	Navigate to /admin/categories	403 error page or redirect; page content hidden
UTH-04	Token expiry handling	Login; reduce token TTL for test	Wait until token expires; refresh a protected page	Redirect to login; friendly session-expired message
UTH-05	Registration form validation	Public registration enabled	Open registration; submit empty form	Required field errors shown
UTH-06	Register new player and login	Public registration enabled	Complete form; verify email if enabled; login	Player profile page visible
UTH-07	Forgot password with valid email	User email exists	Open forgot password; enter email; submit	Success toast; email sent (mock/console)
UTH-08	Forgot password with unknown email	No account for given email	Submit unknown email	Generic message without enumerating accounts
UTH-09	Logout clears session	Logged-in as any user	Click logout	Redirect to login; token removed from storage
UTH-10	UI hides actions by role	Login as USER	Visit Admin pages and buttons	Admin-only buttons hidden; no DOM access
UTH-11	Rate limiting / brute-force basic guard (manual)	N/A	Attempt multiple failed logins (>=5) quickly	Lockout or captcha message (if configured)
UTH-12	Remember me / session persistence	N/A	Login with remember me; close and reopen tab	Session persists within TTL

3.2 Player Registration & Check-In

TC ID	Scenario	Pre-conditions	Steps	Expected Result
LY-01	Create player with valid details	Logged in as Admin	Open Players → New; fill form; save	Player appears in list with ID
LY-02	Duplicate player detection by email/phone	An existing player with same email	Create player with duplicate email	Validation error prevents save
LY-03	Assign player to category (age/gender OK)	Player exists; suitable category exists	Open player; assign category	Assignment saved; badge appears
LY-04	Assign player to unsuitable category (age/gender mismatch)	Player exists	Try assigning mismatch category	Validation error shown

TC ID	Scenario	Pre-conditions	Steps	Expected Result
LY-05	Check-in player	Player registered to category	Open Registrations; click Check-in	Checked-in status shows with timestamp and checkedInBy
LY-06	Undo check-in	Player checked-in	Click Undo check-in	Status reverts; audit updated
LY-07	Withdraw player	Player registered	Click Withdraw; confirm	Registration status becomes Withdrawn; excluded from draws
LY-08	Search & filter players	Multiple players exist	Use name/email filters; sort columns	List updates correctly; pagination works
LY-09	CSV import – valid rows	CSV prepared	Upload CSV; map columns; import	Rows created; summary shows successes/failures
LY-10	CSV import – invalid rows	CSV with bad data	Upload; import	Invalid rows listed with reasons; no partial corrupt inserts
LY-11	Edit player info	Player exists	Open edit dialog; change phone; save	Changes persist; audit timestamp updated
LY-12	Delete player with dependencies	Player registered in category	Attempt delete	Prevented with message; suggest withdraw first

3.3 Teams & Doubles

TC ID	Scenario	Pre-conditions	Steps	Expected Result
EAM-01	Create doubles team with two players	Two eligible players exist	Open Teams → New; select P1, P2; save	Team created; label Surname1/Surname2
EAM-02	Team name rule (admin view shows TeamName (S1/S2))	Team has custom name	Open team list (admin)	Display: TeamName (S1/S2)
EAM-03	User view hides surnames when TeamName exists	Logged in as USER	Open Teams page	Display: TeamName only
EAM-04	Mixed doubles gender validation	Male + male selected	Try to create XD team with invalid combo	Validation error prevents save
EAM-05	Prevent duplicate pairing	Same pair already registered	Attempt to create same pair	Duplicate warning; save blocked
EAM-06	Replace partner	Team exists	Edit team; change partner; save	Team updated; downstream registrations flagged to review
EAM-07	Delete team without dependencies	Standalone team	Delete	Team removed
EAM-08	Delete team with active registration	Team in draw	Delete	Prevented; message to withdraw first
EAM-09	Search/filter by category badges (MD/WD/XD)	Multiple teams exist	Filter MD	Only MD teams listed

TC ID	Scenario	Pre-conditions	Steps	Expected Result
EAM-10	Autocomplete validation states	N/A	Try selecting same player twice	Field error; cannot select same player
EAM-11	Team registration linkage	Category open	Register team into category	Linked registration created; capacity reduced
EAM-12	Responsive truncation with tooltip	Long names	Resize window	Label truncates with tooltip showing full text

3.4 Categories Management

TC ID	Scenario	Pre-conditions	Steps	Expected Result
AT-01	Create category (valid)	Logged in as Admin	Open Categories → New; set gender, age, fee; save	Category appears with badges
AT-02	Age range validation	N/A	Set min age > max age	Validation error
AT-03	Capacity unlimited	N/A	Leave capacity blank/unlimited	Badge 'Unlimited' appears
AT-04	Edit category updates badges	Category exists	Change fee; save	Fee badge updates
AT-05	Delete category not in use	No registrations	Delete	Removed successfully
AT-06	Delete category in use	Registrations exist	Attempt delete	Prevented; message to archive or close
AT-07	Pagination & sorting	10+ categories	Sort by fee; go to page 2	Stable sort; pagination retains filters
AT-08	Gender/color badges rendering	N/A	Open list	MALE=blue, FEMALE=pink, OPEN=green (as per theme)
AT-09	Fee formatting	N/A	Set fee ₹500; save	List shows ₹500.00
AT-10	Archive/close category	Category exists	Click Close; confirm	Status=Closed; no new registrations
AT-11	Validation on overlapping age ranges (if enforced)	Two overlapping ranges	Create overlapping	Warning or prevent (per rules)
AT-12	Error handling toast	Simulate API error	Disconnect network; save	Error toast; no partial save

3.5 Scheduling & Courts

TC ID	Scenario	Pre-conditions	Steps	Expected Result
CH-01	Create court	Admin logged in	Courts → New; name/number; save	Court appears and selectable
CH-02	Add blackout window	Court exists	Add blackout 10:00–11:00	Timeline shows greyed slot; scheduling blocked
CH-03	Manual schedule match to court/time	Match exists	Drag match to timeline slot	Match shows assigned court/time

TC ID	Scenario	Pre-conditions	Steps	Expected Result
CH-04	Conflict: player double booking	Player in two matches	Schedule overlaps	Warning badge; prevent drop
CH-05	Conflict: court double booking	Court already busy	Drop another match in same slot	Prevented with tooltip
CH-06	Auto-schedule	Multiple unscheduled matches	Click Auto-schedule	Matches distributed with no conflicts
CH-07	Reschedule via drag-drop	Scheduled match	Drag to new time	Updated; no conflicts
CH-08	Lock court slot	Admin	Lock slot 11:00–11:30	Locked badge; drag-drop disabled
CH-09	Filter timeline by court	Multiple courts	Select Court 2 filter	Only Court 2 events visible
CH-10	Timezone/format display	N/A	View times	24h/IST format consistent (Asia/Kolkata)
CH-11	Undo schedule	Match scheduled	Click Unassign	Match returns to unscheduled list
CH-12	Estimated duration affects end time	Match duration=30m	Assign at 10:00	Ends at 10:30; overlaps checked

3.6 Matches & Status Workflow

TC ID	Scenario	Pre-conditions	Steps	Expected Result
AT-01	Match creation from draw	Draw generated	Open Matches list	Matches present with category/round
AT-02	Status change: Scheduled → In-Progress	Scheduled match	Start match	Status updates; start time set
AT-03	Status change: In-Progress → Completed	In-progress match	Enter final score; complete	Status=Completed; end time set
AT-04	Illegal transition prevented	Scheduled match	Try Completed without scoring	Validation error
AT-05	Walkover scenario	One player absent	Mark WO	Winner auto-assigned; notes recorded
AT-06	Retired/injury scenario	In-progress	Mark Retired for player	Winner set per rules; audit notes
AT-07	Score validation (best of 3 games)	Referee role	Enter invalid game scores	Error; cannot save
AT-08	Undo completion (admin override)	Completed match	Admin clicks Reopen	Back to In-Progress/Scheduled per rules
AT-09	Result visibility on User UI	Completed match	Open User UI results	Scores visible immediately
AT-10	Court/time reflected in match card	Assigned match	Open match details	Court and time shown
AT-11	Notes and incidents logging	N/A	Add incident note	Note recorded with timestamp/user

TC ID	Scenario	Pre-conditions	Steps	Expected Result
AT-12	Pagination and filters by status	N/A	Filter in-progress	Only relevant matches shown

3.7 Referee Scoring & Result Lock

TC ID	Scenario	Pre-conditions	Steps	Expected Result
EF-01	Referee access only to scoring UI	Login as Referee	Open scoring	Scoring UI visible; admin-only hidden
EF-02	Enter valid scores for games	In-progress match	Enter 21–18, 18–21, 21–17; save	Scores saved; winner computed
EF-03	Attempt invalid input (text/negative)	N/A	Type 'aa' or -1	Field validation blocks save
EF-04	Lock result after submission	Scores entered	Click Submit Final	Match locked; editing disabled
EF-05	Admin override unlock	Finalized match	Admin uses Unlock	Scoring becomes editable with audit
EF-06	Tie-break rules enforced	20–20	Enter 30–29 scenario	Allow per rules; illustrate final
EF-07	Connectivity loss handling	Network off	Attempt save	Graceful error; data not lost in form
EF-08	Keyboard-only scoring flow	N/A	Tab through fields; enter; save	Accessible and fast
EF-09	Mobile viewport scoring usability	N/A	Resize to mobile width	Layout adapts; no overflow
EF-10	Warnings on leaving unsaved form	Unsaved changes	Navigate away	Confirmation dialog appears
EF-11	Audit log includes referee & timestamp	Scored match	Open audit	Referee and time recorded
EF-12	Prevent double submit	Slow network	Click submit multiple times	Button disables; one request sent

3.8 Tournament Setup & Format Flexibility

TC ID	Scenario	Pre-conditions	Steps	Expected Result
RN-01	Create tournament shell	Admin	Tournaments → New; set dates; save	Tournament created
RN-02	Operating hours validation	N/A	Set end before start	Validation error
RN-03	Format: Single Elimination	Categories linked	Select format; generate draw	Bracket created correctly
RN-04	Format: Round Robin	Participants >=3	Select RR; generate schedule	RR matches created
RN-05	Settings inheritance (tournament→category→round)	Values at tournament level	Override at category	Overrides applied as expected

TC ID	Scenario	Pre-conditions	Steps	Expected Result
RN-06	Close registration date enforcement	Past date	Try registering after close	Prevented with message
RN-07	Export tournament config	Tournament exists	Click Export	JSON/CSV downloaded
RN-08	Import tournament config	Valid file	Upload file	Config applied and validated
RN-09	Delete tournament with dependencies	Has categories	Delete	Prevented; suggest archive
RN-10	Archive tournament	Completed tournament	Click Archive	Read-only; visible in history
RN-11	Timezone alignment IST	N/A	View dates/times	All in Asia/Kolkata consistently
RN-12	Logo/branding upload	Asset available	Upload logo	Theme reflects logo where applicable

3.9 Reports & Brackets

TC ID	Scenario	Pre-conditions	Steps	Expected Result
PT-01	Generate draw brackets	Category with players	Reports → Generate Draw	Bracket PDF/PNG available
PT-02	Seeding respected	Seed data present	Generate draw	Seeds placed per rules
PT-03	Schedule export CSV	Matches scheduled	Export CSV	CSV columns correct and ordered
PT-04	Results export	Completed matches	Export	Includes scores, winners
PT-05	Bracket view accuracy	Generated bracket	Open bracket	Nodes and lines align; labels correct
PT-06	Filter reports by category/date	N/A	Apply filters	Report grid updates
PT-07	Print-friendly view	N/A	Open print view	Margins/headers suitable
PT-08	Error handling on large data	Many matches	Generate	Progress indicator; success/fail message
PT-09	Share/download permissions	User vs Admin	Attempt as User	Restricted exports; view-only
PT-10	Bracket team label rules	Teams with names	Open bracket	TeamName (S1/S2) for admin; TeamName for user
PT-11	PDF layout correctness	N/A	Open PDF	Consistent font/spacing; no truncation
PT-12	Live refresh after scoring	Score submitted	Reopen report	Latest data shown

3.10 Admin UI & User UI Integration

TC ID	Scenario	Pre-conditions	Steps	Expected Result
IT-01	DataGrid inline edit saves correctly	Admin	Edit cell; press Enter	Saved; cell shows new value
IT-02	ConfirmDialog blocks during loading	N/A	Trigger delete; confirm; observe	Buttons disabled until response
IT-03	Global error boundary renders friendly UI	Simulate throw	Cause component error	Fallback UI visible
IT-04	Theme switch (light/dark)	N/A	Toggle theme	Colors update without flicker
IT-05	Permission guards in routes	Login as USER	Navigate to admin route	Redirect to 403/landing
IT-06	Optimistic UI rollback on failure	N/A	Disable network; perform edit	Reverts and shows toast
IT-07	Loading skeletons visible	Cold load	Open heavy page	Skeleton shown until loaded
IT-08	Search + filters persist across pagination	N/A	Filter; go to page 2; back	Filters retained
IT-09	Accessibility basic checks	N/A	Tab order; aria labels	Focusable and labelled controls
IT-10	My Schedule (User UI)	User has matches	Open My Schedule	Only user's matches listed
IT-11	Notifications/Toasts consistency	N/A	Trigger actions	Toasts follow consistent style
IT-12	Localization placeholders (future-proof)	N/A	Check strings	No hard-coded untranslatable concatenations

3.11 Non-Functional Checks

TC ID	Scenario	Pre-conditions	Steps	Expected Result
F-01	Usability – color contrast	N/A	Check contrast for text/buttons	Meets WCAG AA approx.
F-02	Performance – large DataGrid	Seed 5k–10k rows	Open grid; scroll	Smooth with virtualization
F-03	Security – 403 on unauthorized API	Login as USER	Call admin API	Receives 403; no data leak
F-04	Security – CORS headers	N/A	Cross-origin request	Allowed per config; blocked otherwise
F-05	Resilience – network loss	N/A	Toggle offline; trigger save	Graceful fail; retry option
F-06	State persistence – tabs reload	N/A	Reload page	Critical state restored or refetched
F-07	Mobile responsive sanity	N/A	Resize 360px width	No clipped controls
F-08	Keyboard accessibility	N/A	Use only keyboard	All key flows possible

TC ID	Scenario	Pre-conditions	Steps	Expected Result
F-09	Analytics/Logging (if enabled)	N/A	Trigger events	Logs/metrics captured
F-10	Backup/retention checks	N/A	Verify DB backups present	Backups visible per policy
F-11	Cache busting/version in footer	N/A	Check build version	Version visible and changes per release
F-12	Cross-browser quick check	N/A	Open in Chrome/Firefox	No major differences

4. End-to-End Flows

Key E2E Scenarios

TC ID	Scenario	Pre-conditions	Steps	Expected Result
2E-01	Tournament lifecycle happy path	Seed data available	Admin creates tournament → Categories → Players register → Draw → Auto-schedule → Referee scores → Results published	All modules integrate; reports reflect results
2E-02	Doubles team journey	Two players	Create team → Register to XD → Draw → Schedule → Score → Lock	Team results visible in User UI
2E-03	Blackout adjustment affects schedule	Scheduled matches	Add blackout → Recalculate/resolve conflicts	Conflicting matches flagged/rescheduled
2E-04	Withdraw after draw	Registered player	Withdraw → Redraw/Bye assignment	Bracket updates per rules
2E-05	Referee offline submit attempt	In-progress match	Disconnect; score → error → reconnect → resubmit	State consistent; one final result
2E-06	Role permissions end-to-end	All roles	Ensure each role restricted appropriately throughout flow	No privilege escalation

5. UI Verification Checklist

1. Buttons have clear labels, icons, and disabled states.
2. Form validations show inline messages and prevent invalid saves.
3. Dialogs block background scroll and trap focus.
4. Tables support sort, filter, pagination; empty states are informative.
5. Theme toggle switches palettes without visual glitches.
6. Tooltips show on truncation; long text has ellipsis.
7. Loaders/skeletons appear on slow network.
8. Error toasts are distinct from success toasts.
9. Responsive breakpoints do not cause overlapping components.
10. Keyboard navigation works for all inputs and dialogs.

6. Test Completion & Sign-off

Item	Result (Pass/Fail)	Tester	Date	Comments
Authentication & Roles		_____	_____	
Players & Check-In		_____	_____	
Teams & Doubles		_____	_____	
Categories		_____	_____	
Scheduling & Courts		_____	_____	
Matches & Scoring		_____	_____	
Reports & Brackets		_____	_____	
Integration & UI		_____	_____	
Non-Functional		_____	_____	
E2E Flows		_____	_____	

Sign-off:

QA Lead: _____ Date: _____
Product Owner: _____ Date: _____