# Test Strategy (Test Plan)– Place Bet Feature

## 1. Introduction

This document defines the test approach for the “Place Bet” feature on SportingBet.co.za. The feature enables users to select sports events, add selections to a bet slip, enter stake amounts, and confirm bets. The goal is to ensure that the feature works correctly, is user-friendly, handles edge cases, and meets regulatory/compliance requirements.

## 2. Scope

### In Scope

* User flow validation: Login → Select event → Add bet to slip → Place bet → Confirm receipt.
* Stake validation: Minimum/maximum limits, insufficient balance, decimal vs whole number stakes.
* Odds validation: Handling odds changes pre-confirmation.
* UI/UX checks: Responsiveness on mobile and desktop, accessibility of bet slip controls.
* API testing: Validation of request/response structure for bet placement.
* Cross-browser/device testing: Chrome, Edge, Safari, iOS Safari, Android Chrome.

### Out of Scope

* Bet settlement and winnings payout.
* Payment processing (covered under Payments testing).
* Third-party integrations (e.g., odds providers).
* Localization and translations.

## 3. Test Types

### Manual Testing

* Exploratory testing of the bet slip on different devices.
* Validation of edge cases (e.g., insufficient balance, expired session).
* Negative testing for invalid stakes.

### Automated Testing

* UI Automation: Playwright + Cucumber for happy path and regression scenarios.
* API Automation: Postman/Newman d for bet placement and response validation.
* Regression Suite: Run in CI/CD pipeline with Azure DevOps.

### Performance Testing

* Using k6 to simulate high loads on bet placement endpoints (e.g., 1,000 concurrent users placing bets).
* Using JMeter for stress and spike testing during peak sporting events.

## 4. Environment & Tools

* Environments:
  + QA Staging (primary test environment, with mocked payments).
  + Production (post-release smoke checks).
* Tools:
  + Test Automation: Playwright, Postman.
  + Performance: k6.
  + Defect Management: Jira.
  + CI/CD: Azure DevOps for automated test execution.

## 5. Risks & Mitigations

| Risk | Mitigation |
| --- | --- |
| Peak load during big matches (e.g., EPL or World Cup) may cause bet delays or failures. | Run performance tests in staging with peak load simulations. Monitor production with Grafana. |
| Odds changes mid-placement may confuse users. | Ensure app displays clear error/confirmation messages when odds change. |
| Users attempting invalid stakes (e.g., less than R1 or more than R10,000). | Automate stake validation checks against regulatory requirements. |
| API downtime for bet placement. | Introduce retry mechanisms and validate error handling in tests. |

## 6. Sample Test Cases

| ID | Test Scenario | Preconditions | Steps | Expected Result |
| --- | --- | --- | --- | --- |
| TC01 | Place bet successfully (Happy Path) | User logged in with sufficient balance | 1. Select event2. Add bet to slip3. Enter valid stake4. Confirm bet | Bet placed successfully, balance reduced, bet receipt generated |
| TC02 | Insufficient balance | User logged in with balance < stake | 1. Select event2. Add bet3. Enter stake higher than balance4. Place bet | Error message “Insufficient funds” displayed, bet not placed |
| TC03 | Odds change before confirmation | User logged in with valid balance | 1. Select event2. Add bet3. Wait for odds to change4. Try to confirm | System prompts user to accept new odds or cancel bet |
| TC04 | Invalid stake (below min limit) | User logged in | 1. Select event2. Enter stake below allowed minimum3. Try to confirm | Validation error shown: “Minimum stake is R1” |
| TC05 | Session expired during bet | User logged in but session expired | 1. Select event2. Add bet3. Place bet | System redirects to login page with error: “Session expired” |
| TC06 | Invalid pagination for user bet history | User logged in | 1. Call API with invalid pagination params2. Observe response | API returns 400 error with appropriate error message |

## 7. Exit Criteria

* 100% of critical and high-severity scenarios executed.
* ≥95% of automated regression suite passed.
* No open Critical defects, ≤2 open Major defects allowed.
* Stakeholder sign-off achieved.