

HSC Formula Aid App - Bug Report

Application: HSC Formula Aid by Avishek Das

Platforms: iOS & Android

Test Date: 28.07.2025

Tester: Himani Das

Report Version: 1.0

Executive Summary

Total Tests Conducted: 25

Tests Passed: 12 (48%)

Tests Failed: 13 (52%)

Bug Distribution by Severity:

- **Critical:** 4 bugs (31%)
 - **Major:** 5 bugs (38%)
 - **Minor:** 4 bugs (31%)
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Critical Bugs (Immediate Fix Required)

BUG-001: Missing Examples for Key Concepts

Test Case: TC-13

Severity: Critical

Priority: P1

Evidence: [Screenshots](#)

Description:

Multiple formula sections display "Example Isn't Available" messages, preventing students from accessing learning examples.

Impact:

- Blocks core educational functionality
- Students cannot learn effectively without examples
- Defeats primary app purpose

Steps to Reproduce:

1. Navigate to Physics sections
2. Look for example content
3. Observe "Example Isn't Available" messages

Expected Result: Examples should be available for all formulas

Actual Result: Missing examples in multiple sections

BUG-002: Incomplete Chapter Content Structure

Test Case: TC-14

Severity: Critical

Priority: P1

Evidence: [Screenshots](#)

Description:

Inconsistent content delivery across chapters and subjects. Some Physics chapters missing short questions, Biology lacks MCQ sections.

Impact:

- Creates educational gaps for students
- Inconsistent learning experience
- Incomplete exam preparation coverage

Steps to Reproduce:

1. Navigate through Physics chapters
2. Check for short questions sections
3. Navigate to Biology sections
4. Look for MCQ availability

Expected Result: All chapters should have consistent content structure

Actual Result: Missing content in various chapters and subjects

BUG-003: Formula Text Format and Alignment Issues

Test Case: TC-15

Severity: Critical

Priority: P1

Evidence: [Screenshots](#)

Description:

Mathematical formulas have inconsistent formatting and poor alignment across different sections.

Impact:

- Affects readability of essential formulas
- Impacts primary learning functionality
- Poor professional appearance

Steps to Reproduce:

1. Navigate to all formulas
2. Observe formula alignment
3. Check physics magnetic field equations
4. Compare formatting consistency

Expected Result: Consistent formula formatting and alignment

Actual Result: Inconsistent and poorly aligned formula text

BUG-004: Poor Example Content Loading Performance

Test Case: TC-24

Severity: Critical

Priority: P1

Evidence: [Screenshots](#)

Description:

Example content takes excessive time to load, exceeding acceptable performance limits.

Impact:

- Blocks access to learning materials

- Poor user experience
- Affects app usability significantly

Steps to Reproduce:

1. Navigate to example sections
2. Measure loading time
3. Test on different network conditions

Expected Result: Content should load within 2-3 seconds

Actual Result: Loading time exceeds acceptable limits

Major Bugs (High Priority Fix)

BUG-005: Cross-Platform Menu and Layout Inconsistency

Test Case: TC-17

Severity: Major

Priority: P2

Evidence: [Screenshots](#)

Description:

iPhone version missing 2 menu options available on Android. Text heading not showing on iPhone, text alignment differs between platforms.

Impact:

- Platform-specific feature gaps
- Inconsistent user experience
- Cross-platform functionality issues

Steps to Reproduce:

1. Open hamburger menu on Android
2. Note all available options
3. Open same menu on iPhone
4. Compare options and layout

Expected Result: Identical menu options and layout on both platforms

Actual Result: iPhone missing features and layout inconsistencies

BUG-006: Subject Organization and Navigation Issues

Test Case: TC-16

Severity: Major

Priority: P2

Evidence: [Screenshots](#)

Description:

Navigation problems in middle sections, Biology part1/part2 not properly separated like other subjects.

Impact:

- Affects content discoverability
- Poor navigation experience
- Inconsistent subject organization

Steps to Reproduce:

1. Navigate through subject menu
2. Check Biology section organization
3. Compare with other subjects
4. Test middle section navigation

Expected Result: Consistent subject organization and clear navigation

Actual Result: Organization issues and navigation problems

BUG-007: UI Element Alignment and Missing Back Buttons

Test Case: TC-20

Severity: Major

Priority: P2

Evidence: [Screenshots](#)

Description:

Multiple alignment issues across sections, some pages missing back buttons affecting navigation.

Impact:

- Makes app appear unprofessional
- Navigation difficulties
- Poor visual consistency

Steps to Reproduce:

1. Navigate through different sections
2. Check element alignment
3. Look for missing back buttons
4. Test navigation consistency

Expected Result: Proper alignment and consistent navigation

Actual Result: Alignment issues and missing navigation elements

BUG-008: Scrolling Performance Issues

Test Case: TC-21

Severity: Major

Priority: P2

Evidence: [Screenshots](#)

Description:

Noticeable lag and stuttering during scrolling throughout the app.

Impact:

- Significantly impacts user interaction
- Performance degradation affects usability
- Poor user experience

Steps to Reproduce:

1. Navigate to content-heavy pages
2. Perform vertical scrolling
3. Observe performance issues
4. Test on different devices

Expected Result: Smooth scrolling without lag.

Actual Result: Lag and stuttering observed

BUG-009: Page Layout and Pagination Issues

Test Case: TC-25

Severity: Major

Priority: P2

Evidence: [Screenshots](#)

Description:

Pages are not full-screen, page numbers show incorrect page references.

Impact:

- Poor layout utilization
- Incorrect page numbering affects navigation
- Unprofessional appearance

Steps to Reproduce:

1. Navigate to content pages
2. Check page layout coverage
3. Verify page numbering accuracy
4. Test pagination functionality

Expected Result: Full screen pages with correct numbering

Actual Result: Partial screen coverage and improper page numbers

Minor Bugs (Medium Priority Fix)

BUG-010: Text Hierarchy Implementation Issues

Test Case: TC-18

Severity: Minor

Priority: P3

Evidence: [Screenshots](#)

Description:

Inconsistent heading styles, text alignment issues, highlighting problems, and some blank pages.

Impact:

- Affects content readability
- Visual consistency issues
- User experience degradation

Steps to Reproduce:

1. Navigate to any subject section
2. Observe heading styles and formatting
3. Check subheading formatting consistency
4. Verify body text formatting across sections
5. Look for blank pages

Expected Result: Clear text hierarchy with consistent heading styles, proper typography levels

Actual Result: Text hierarchy implementation is inconsistent across different sections, highlighting issues and some pages are blank

BUG-011: Improper Element Spacing

Test Case: TC-19

Severity: Minor

Priority: P3

Evidence: [Screenshots](#)

Description:

Inconsistent spacing between UI elements, cramped mathematical expressions, uneven vertical gaps.

Impact:

- Poor visual presentation
- Readability issues
- Unprofessional appearance

Steps to Reproduce:

1. Navigate through different screens
2. Check spacing between formulas
3. Verify spacing between different content blocks
4. Check margins and padding consistency
5. Verify element alignment

Expected Result: Consistent and appropriate spacing between all UI elements

Actual Result: Spacing between elements is inconsistent and improper in many sections - cramped spacing between mathematical expressions, uneven vertical gaps, inconsistent padding around formula blocks

BUG-012: Scroll Position Memory Partially Working

Test Case: TC-22

Severity: Minor

Priority: P3

Evidence: [Screenshots](#)

Description:

Scroll position remembered after backgrounding but resets when navigating between sections within the app.

Impact:

- User convenience issue
- Partial functionality affects user experience
- Navigation efficiency reduced

Steps to Reproduce:

1. Navigate to a long content section
2. Scroll down to a specific position
3. Navigate away from the section to another section
4. Return to the same section
5. Check if scroll position is remembered
6. Test: Minimize the app (background) and reopen it
7. Verify scroll position after backgrounding

Expected Result: App should remember scroll position when returning to previously viewed sections, both after backgrounding and after navigating away within the app

Actual Result: Backgrounding Test: Scroll position correctly remembered. Navigation Test: Scroll position resets to top when navigating between sections inside the app

BUG-013: Inconsistent Image and Diagram Sizing

Test Case: TC-23

Severity: Minor

Priority: P3

Evidence: [Screenshots](#)

Description:

Images and diagrams have inconsistent sizing and some appear too small affecting visibility.

Impact:

- Layout inconsistency
- Reduced visual clarity

- Poor content presentation

Steps to Reproduce:

1. Navigate between different chapters
2. Check image quality and sizing
3. Verify visibility of every image and diagram
4. Compare image dimensions across sections
5. Test on different screen sizes

Expected Result: All images should be of consistent size, clearly visible and not too small to impact user experience

Actual Result: Some images/diagrams appear smaller than others and image dimensions are inconsistent across sections, causing layout inconsistency

Recommendations

Immediate Actions (Critical Bugs)

1. **Content Completion:** Fill all missing examples and ensure complete chapter structure
2. **Formula Formatting:** Implement consistent formatting standards for all mathematical content
3. **Performance Optimization:** Address loading time issues for better user experience

High Priority Actions (Major Bugs)

1. **Cross-Platform Parity:** Ensure iPhone app has all Android features
2. **UI/UX Standardization:** Fix alignment issues and implement consistent navigation
3. **Performance Tuning:** Resolve scrolling lag and layout issues

Medium Priority Actions (Minor Bugs)

1. **Visual Consistency:** Standardize text hierarchy and spacing
2. **Image Optimization:** Ensure consistent sizing and quality
3. **Navigation Enhancement:** Improve scroll position memory functionality

Quality Assurance Process

1. Implement systematic testing for content completeness
 2. Establish UI/UX design guidelines and standards
 3. Regular cross-platform compatibility testing
 4. Performance testing on various devices and network conditions
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Test Environment Details

- **iOS Devices:** iPhone (various models)
- **Android Devices:** Various Android smartphones
- **Network Conditions:** WiFi and mobile data
- **App Versions:** Current production release