

Wireframe Layout Specification: Exam-Taking Platform - Student Module

Document Information

- **Product Name:** Student Exam Assessment Platform
- **Version:** 1.0
- **Date:** September 2025
- **Document Type:** Text-Based Wireframe Specification
- **Responsive Design:** Mobile-First Approach
- **Target Devices:** Desktop (1024px+), Tablet (768px+), Mobile (320px+)

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Design Principles & Standards

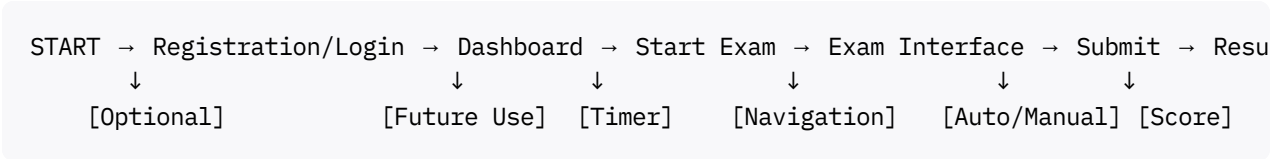
Design System Guidelines

- **Grid System:** 12-column responsive grid
- **Spacing Unit:** 8px base unit (8px, 16px, 24px, 32px, 48px)
- **Typography Scale:** Base 16px, Scale ratio 1.25
- **Color System:** Neutral grays with accent colors for status
- **Component Consistency:** Reusable components across all screens
- **Mobile-First:** Design for smallest screen first, then scale up

Wireframe Fidelity Level

- **Type:** Mid-Fidelity Wireframes
- **Detail Level:** Clear layout structure with placeholder content
- **Content:** Real labels, Lorem ipsum for body text
- **Interactions:** Indicated with annotations
- **Visual Style:** Grayscale with minimal color for emphasis

User Flow Overview

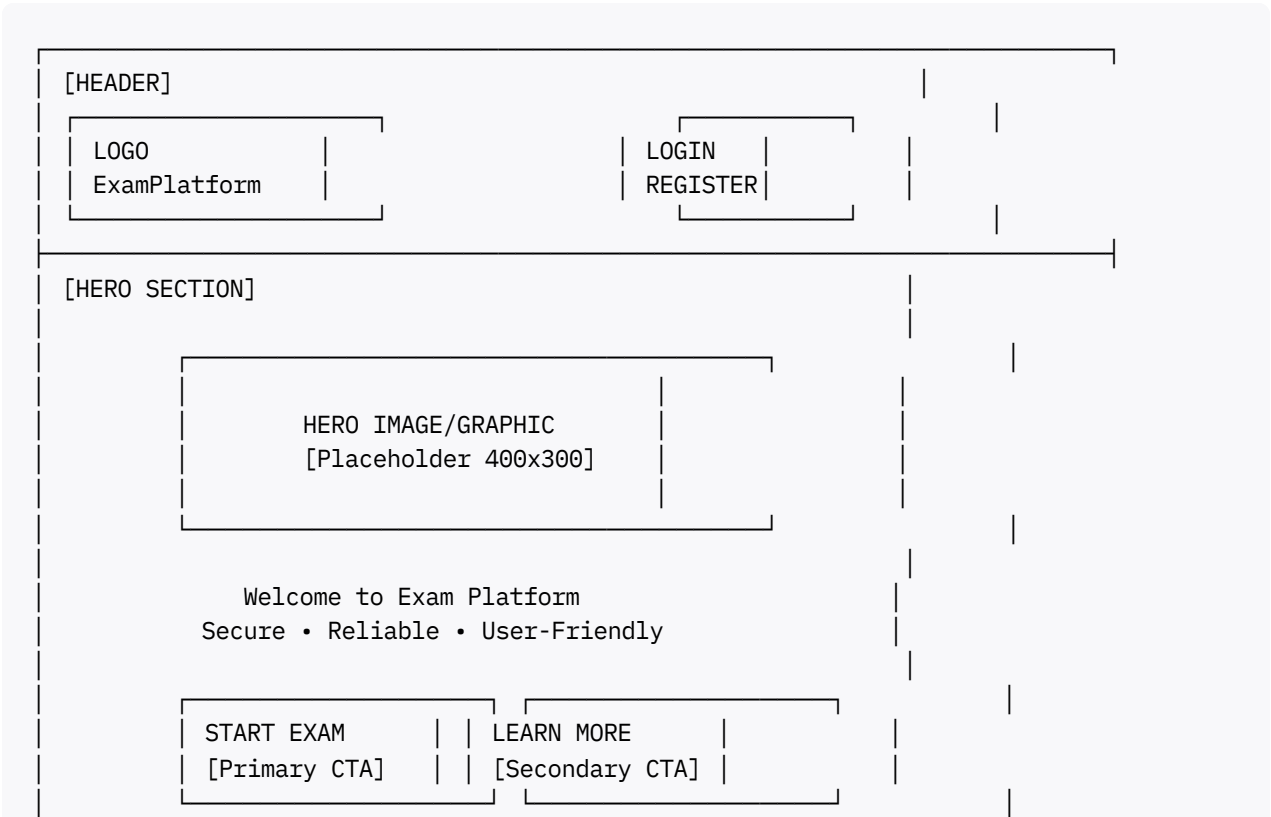


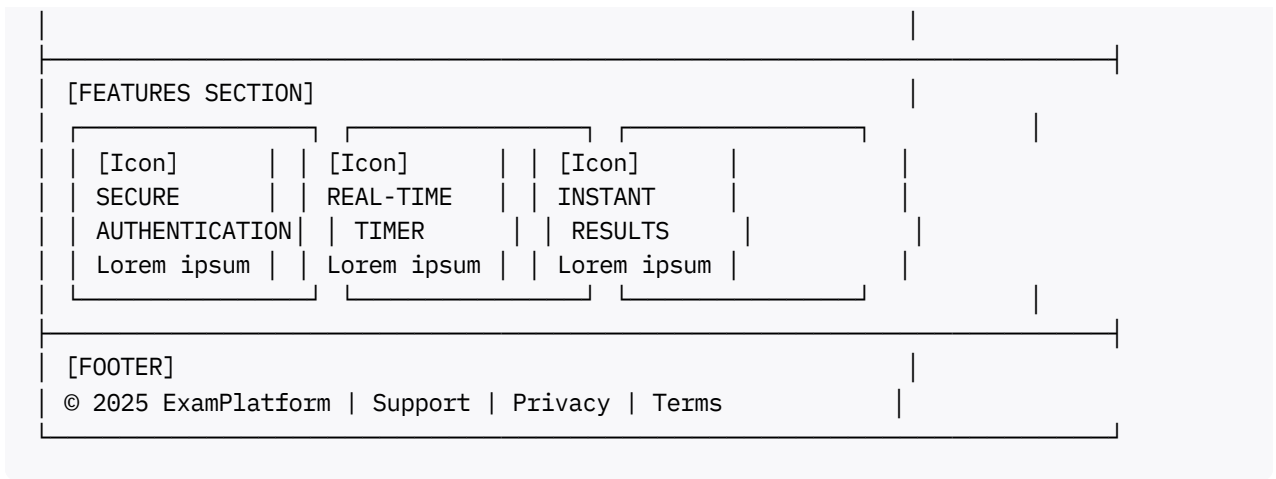
Primary User Paths

1. **New User:** Registration → Email Verification → Login → Exam
2. **Returning User:** Login → Exam
3. **Exam Flow:** Start → Answer Questions → Submit → View Results

Screen Wireframes

1. Landing/Welcome Page

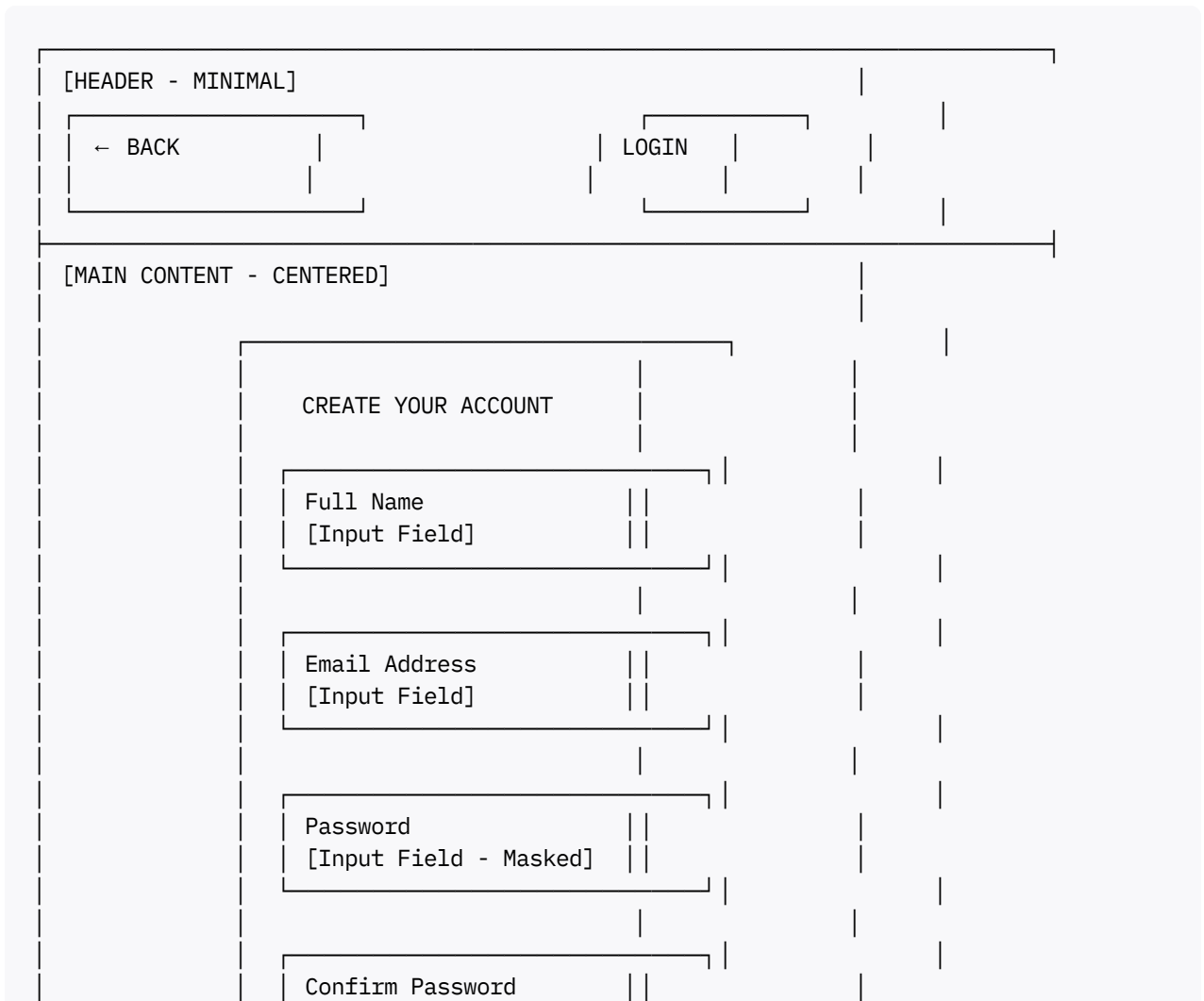




Annotations:

- Header: Fixed position, responsive navigation
- Hero CTA: Redirects to registration/login flow
- Features: 3-column grid on desktop, stacked on mobile
- Footer: Minimal links, always visible

2. Registration Page



[Input Field - Masked] ||

Student ID (Optional)
[Input Field] ||

☒ I agree to Terms & Conditions

CREATE ACCOUNT
[Primary Button] ||

Already have an account?
[Login Here]

Annotations:

- Form Validation: Real-time validation with inline error messages
- Password Strength: Visual indicator below password field
- Accessibility: Proper labels, ARIA attributes, keyboard navigation
- Mobile: Single column layout, larger touch targets

3. Login Page

[HEADER - MINIMAL]

← BACK REGISTER

[MAIN CONTENT - CENTERED]

WELCOME BACK

Email Address
[Input Field] ||

Password
[Input Field - Masked] ||

☒ Remember Me

[\[Forgot Password?\]](#)

LOGIN

[Primary Button]

Don't have an account?

[\[Register Here\]](#)

Annotations:

- Error Handling: Display authentication errors above form
- Session Management: Remember Me checkbox for extended sessions
- Password Recovery: Link to forgot password flow
- Loading State: Button shows spinner during authentication

4. Dashboard/Exam Lobby

[HEADER - AUTHENTICATED]

LOGO

ExamPlatform

Student Dashboard

PROFILE

LOGOUT

[WELCOME SECTION]

Welcome back, [Student Name]!

You are ready to begin your examination.

[EXAM CARD]

ASSESSMENT EXAM

[Icon]

Duration: 30 minutes

Questions: 20 MCQs

Status: Ready to Start

START EXAM

[Primary Button]

[INSTRUCTIONS SECTION]

EXAM INSTRUCTIONS

- Read each question carefully
- Select only one answer per question
- You can navigate between questions
- Exam will auto-submit when time expires
- Internet connection required throughout

☒ I have read and understood the instructions

[SYSTEM CHECK]

SYSTEM REQUIREMENTS

- ✓ Browser Compatibility
- ✓ Internet Connection
- ✓ JavaScript Enabled
- ✓ Screen Resolution

Annotations:

- Pre-Exam Validation: System requirements check before starting
- Instructions Acknowledgment: Required checkbox before enabling start button
- Responsive Cards: Stack vertically on mobile devices
- Status Indicators: Visual feedback for each system requirement

5. Exam Interface - Question Screen

[EXAM HEADER - FIXED]

ExamPlatform

Question 5 of 20

23:45

[Timer]

[PROGRESS BAR]

25% Complete

[MAIN CONTENT AREA]

[QUESTION PANEL]

5. What is the primary purpose of React's Virtual DOM?

- A) To replace the actual DOM entirely
- B) To optimize rendering performance
- C) To store application state
- D) To handle network requests

←

PREVIOUS

MARK FOR REVIEW

NEXT

→

QUESTION NAVIGATOR

1

2

3

4

5

6

7

8

9

10

✓

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Legend:

✓

 Answered

●

 Current

○

 Not Answered

SUBMIT EXAM

[Secondary Button]

Annotations:

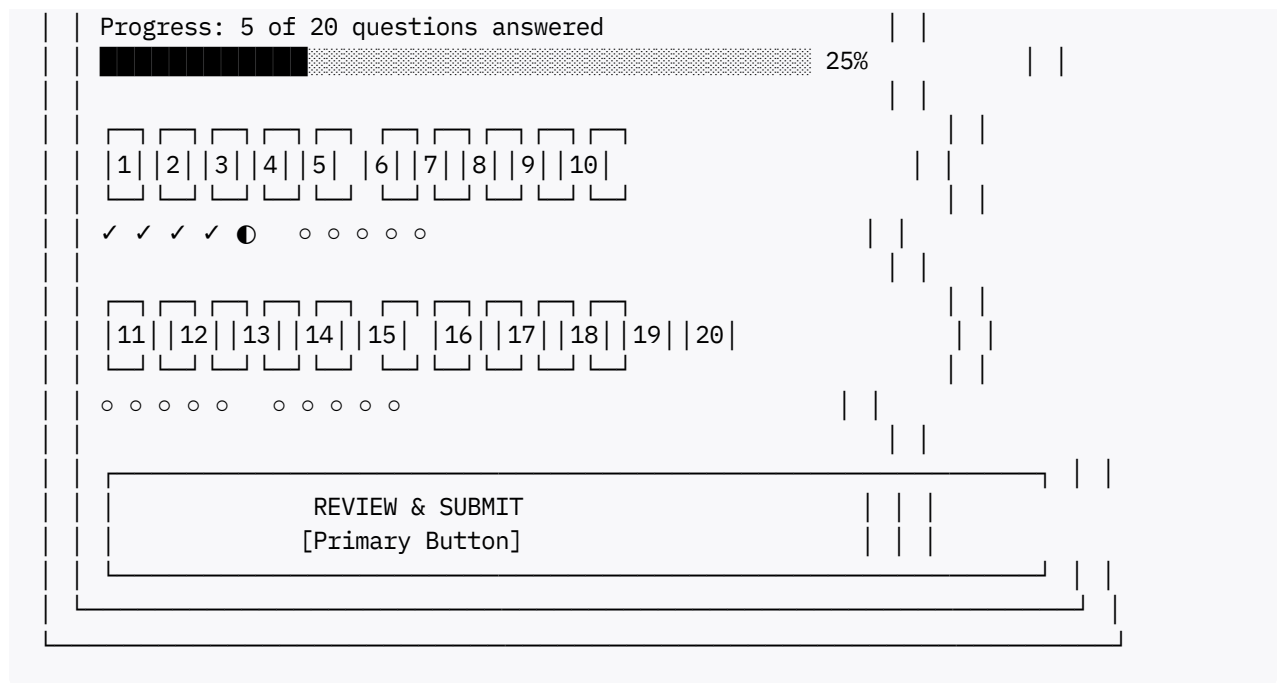
- Timer: Color-coded (Green > Yellow > Red) with warnings
- Auto-Save: Answers saved automatically on selection
- Accessibility: Keyboard navigation, screen reader support
- Mobile Adaptation: Sidebar collapses to bottom drawer
- Visual Feedback: Clear indication of answered/current questions

6. Question Navigator (Mobile Overlay)

CLOSE

QUESTION OVERVIEW

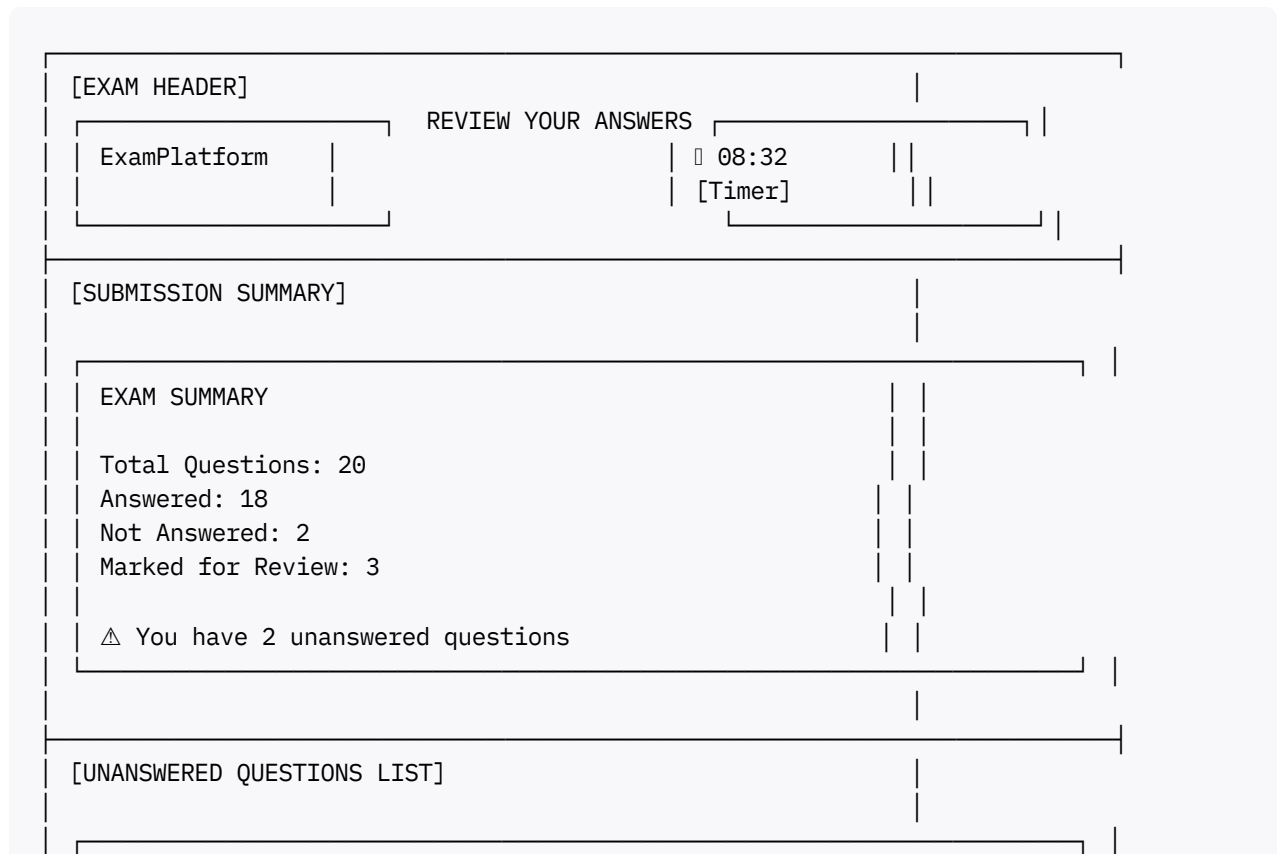
X



Annotations:

- Modal Overlay: Semi-transparent background, center-positioned
- Touch Targets: Larger question numbers for mobile interaction
- Quick Jump: Tap any question number to navigate directly
- Progress Indicator: Clear visual progress representation

7. Exam Review Screen (Pre-Submission)



QUESTIONS REQUIRING ATTENTION

⚠ Question 7: Not Answered

[Go to Question 7]

⚠ Question 15: Not Answered

[Go to Question 15]

🔍 Question 3: Marked for Review

[Go to Question 3]

🔍 Question 12: Marked for Review

[Go to Question 12]

🔍 Question 18: Marked for Review

[Go to Question 18]

[SUBMISSION CONTROLS]

← CONTINUE EXAM

[Secondary]

SUBMIT EXAM

[Primary]

⚠ Once submitted, you cannot change your answers

Annotations:

- Warning Indicators: Clear visual distinction for issues
- Quick Navigation: Direct links to problematic questions
- Confirmation Required: Final warning before submission
- Time Awareness: Timer continues to count down

8. Final Submission Confirmation

[MODAL OVERLAY - SUBMISSION CONFIRMATION]

🔍 CONFIRM SUBMISSION

Are you sure you want to submit your exam? This action cannot be undone.

Summary:

- Total Questions: 20
- Answered: 18

• Not Answered: 2

• Time Remaining: 08:32

CANCEL
[Secondary]

SUBMIT
[Primary]

Annotations:

- Modal Dialog: Centered, focus-trapped overlay
- Summary Information: Key statistics for final review
- Clear Actions: Cancel to continue, Submit to finalize
- Accessibility: Proper focus management and escape handling

9. Results/Score Display Page

[HEADER]

ExamPlatform

EXAM RESULTS

HOME
LOGOUT

[RESULTS HERO SECTION]

🎉 CONGRATULATIONS!

YOUR SCORE

18/20
90%

PASSED ✓

[DETAILED BREAKDOWN]

EXAM STATISTICS

| | |
|-----------------|-----------------|
| Total Questions | Correct Answers |
| 20 | 18 |

Incorrect
2

Time Taken
21:28

Percentage
90%

Status
PASSED

[PERFORMANCE BREAKDOWN] (Optional Detail)

QUESTION-BY-QUESTION REVIEW

Q1: ✓ Correct

Q2: ✓ Correct

Q3: ✓ Correct

Q4: ✓ Correct

Q5: ✓ Correct

Q6: ✓ Correct

Q7: ✗ Incorrect

Q8: ✓ Correct

Q9: ✓ Correct

Q10: ✓ Correct

Q11: ✓ Correct

Q12: ✓ Correct

Q13: ✓ Correct

Q14: ✓ Correct

Q15: ✗ Incorrect

Q16: ✓ Correct

Q17: ✓ Correct

Q18: ✓ Correct

Q19: ✓ Correct

Q20: ✓ Correct

[ACTION BUTTONS]

DOWNLOAD PDF
CERTIFICATE
[Secondary]

TAKE ANOTHER
EXAM
[Primary]

[SUBMISSION DETAILS]

Submitted on: September 1, 2025 at 4:47 PM IST

Submission ID: EX-2025-001-456789

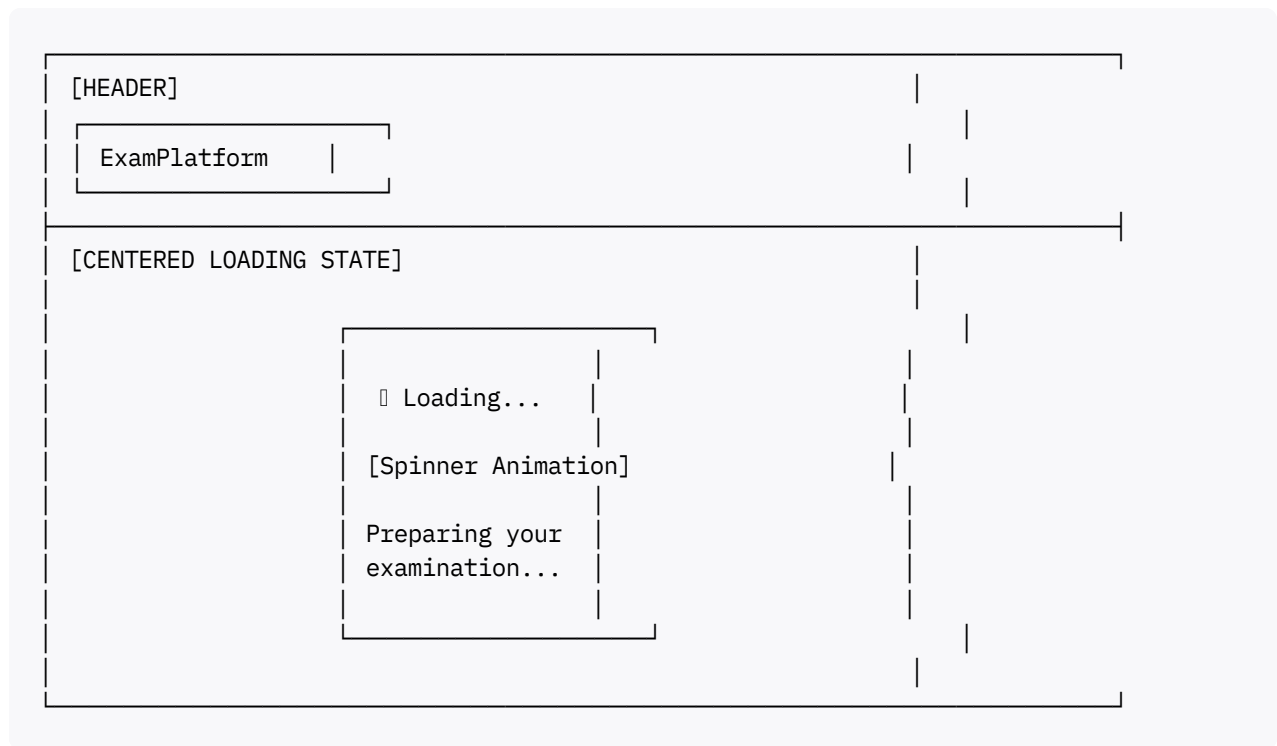
Duration: 21 minutes 28 seconds

Annotations:

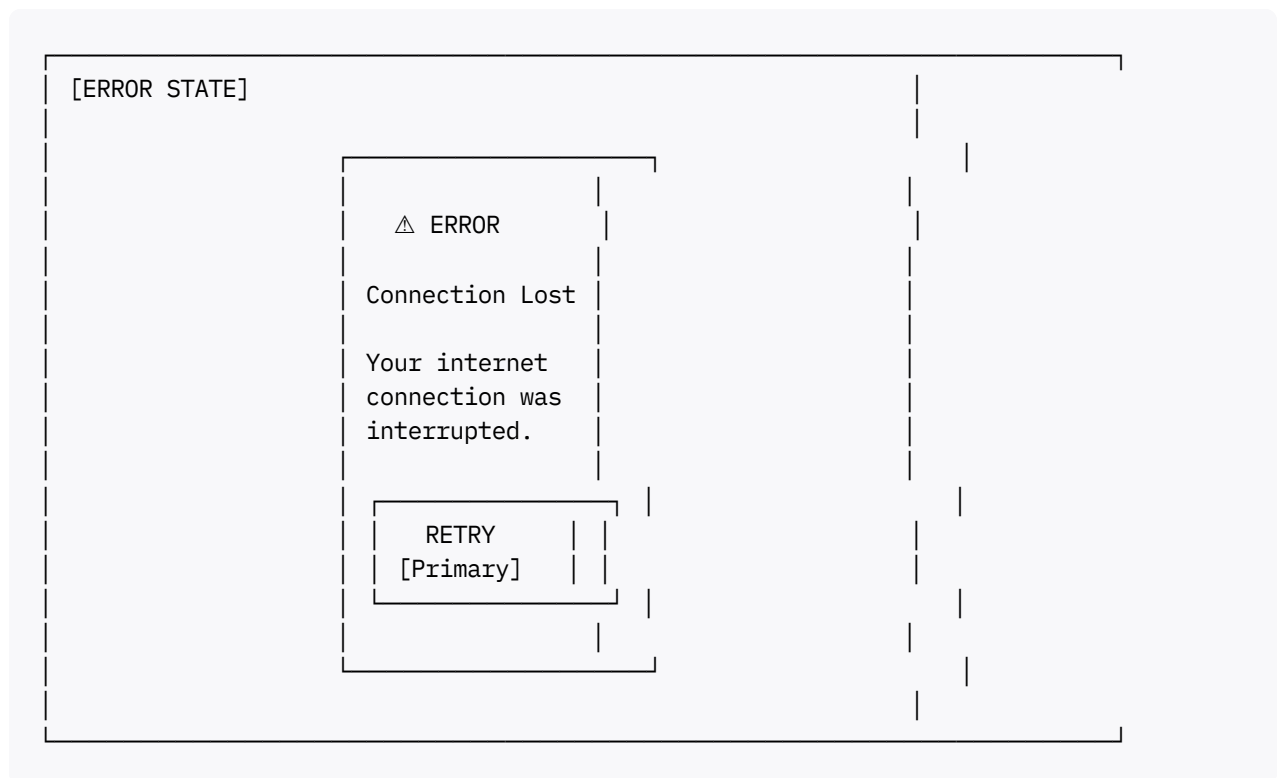
- Visual Celebration: Positive reinforcement for completion
- Clear Metrics: Easy-to-understand performance indicators
- Actionable Items: Download certificate, retake options
- Audit Trail: Submission details for record-keeping

10. Error States & Loading Screens

10.1 Loading Screen



10.2 Network Error State



Component Library

1. Button Components

BUTTON VARIATIONS

PRIMARY

[Blue BG]

SECONDARY

[White BG]

DANGER

[Red BG]

DISABLED

[Gray BG]

LOADING

[+ Spinner]

ICON

[Icon Text]

STATES: Default, Hover, Active, Focus, Disabled

SIZES: Small (32px), Medium (40px), Large (48px)

2. Form Components

INPUT FIELD VARIATIONS

Label Text

Placeholder text

[Icon]

Helper text or validation message

STATES:

- Default: Border gray, no background
- Focus: Border blue, slight shadow
- Error: Border red, error message below
- Success: Border green, success icon
- Disabled: Gray background, gray text

TYPES: Text, Email, Password, Number, Tel

3. Timer Component

TIMER COMPONENT STATES

Normal (>10 min): ⬇ 23:45

Warning (5-10 min): ⚠ 08:32

Critical (<5 min): ⬇ 02:15

BEHAVIOR:

- Updates every second
- Color changes based on time remaining
- Shows warning notifications at 10, 5, 1 minute marks
- Auto-submits at 00:00
- Synchronized with server time

4. Progress Indicators

PROGRESS BAR COMPONENT

 25% Complete

QUESTION STATUS INDICATORS:

✓ Answered ● Current ○ Not Answered ▢ Review

LOADING SPINNER:

🔄 (Rotating animation)

5. Notification Components

NOTIFICATION TYPES

✓ SUCCESS: Action completed successfully

⚠ WARNING: Please check your internet connection

✗ ERROR: Unable to save your answer. Please try again

i INFO: 5 minutes remaining in your exam

POSITIONING: Top-right corner, auto-dismiss after 5 seconds

Responsive Behavior

Breakpoint Strategy

| | |
|--|-----------------|
| RESPONSIVE BREAKPOINTS | |
| Mobile: | 320px - 767px |
| Tablet: | 768px - 1023px |
| Desktop: | 1024px - 1439px |
| Large: | 1440px+ |
| LAYOUT CHANGES: | |
| Mobile (320px): | |
| <ul style="list-style-type: none">• Single column layout• Question navigator as bottom drawer• Stacked form elements• Touch-optimized button sizes (44px min)• Simplified navigation | |
| Tablet (768px): | |
| <ul style="list-style-type: none">• Two-column layout where appropriate• Side panel for question navigator• Larger text and spacing• Horizontal form layouts | |
| Desktop (1024px+): | |
| <ul style="list-style-type: none">• Full sidebar layout• Multiple columns for content• Hover states and interactions• Keyboard shortcuts enabled | |

Mobile-Specific Adaptations

| | |
|--|--|
| MOBILE OPTIMIZATIONS | |
| 1. NAVIGATION: | |
| <ul style="list-style-type: none">• Question navigator as modal overlay• Swipe gestures for next/previous• Enlarged touch targets (minimum 44px) | |
| 2. TIMER DISPLAY: | |
| <ul style="list-style-type: none">• Prominent placement at top• Larger font size for readability• Color-coded urgency indicators | |
| 3. QUESTION LAYOUT: | |
| <ul style="list-style-type: none">• Single column for options• Increased spacing between elements• Simplified radio button styling | |

- 4. PERFORMANCE:
 - Optimized images and assets
 - Reduced animations and effects
 - Efficient scrolling and rendering
- 5. ACCESSIBILITY:
 - Larger text sizes
 - High contrast colors
 - Voice-over compatibility

Accessibility Specifications

WCAG 2.1 AA Compliance

ACCESSIBILITY REQUIREMENTS

- 1. KEYBOARD NAVIGATION:
 - Tab order: Logical and predictable
 - Focus indicators: Visible on all interactive elements
 - Shortcuts: Arrow keys for question navigation
 - Escape: Close modals and overlays
- 2. SCREEN READER SUPPORT:
 - Semantic HTML elements
 - ARIA labels and descriptions
 - Live regions for timer and status updates
 - Alternative text for icons and images
- 3. COLOR & CONTRAST:
 - Minimum 4.5:1 contrast ratio for normal text
 - Minimum 3:1 contrast ratio for large text
 - No information conveyed by color alone
 - High contrast mode support
- 4. TEXT & READABILITY:
 - Minimum 16px base font size
 - Clear typography hierarchy
 - Sufficient line spacing (1.5x minimum)
 - Text resize support up to 200%
- 5. INTERACTION:
 - Error identification and descriptions
 - Form labels associated with inputs
 - Timeout warnings with extension options
 - No auto-playing audio or video

Screen Reader Annotations

ARIA IMPLEMENTATION EXAMPLES

```
<main role="main" aria-label="Exam Interface">
  <div aria-live="polite" aria-atomic="true">
    Timer: 23 minutes 45 seconds remaining
  </div>

  <fieldset>
    <legend>Question 5 of 20</legend>
    <div class="question-text" id="q5">
      What is the primary purpose of React's Virtual DOM?
    </div>

    <div role="radiogroup" aria-labelledby="q5">
      <label>
        <input type="radio" name="q5" value="a"
          aria-describedby="q5-option-a">
        <span id="q5-option-a">
          A) To replace the actual DOM entirely
        </span>
      </label>
      <!-- Additional options... -->
    </div>
  </fieldset>

  <nav aria-label="Question Navigation">
    <button aria-label="Previous Question">← Previous</button>
    <button aria-label="Next Question">Next →</button>
  </nav>
</main>
```

Interaction Patterns

User Input Patterns

INTERACTION SPECIFICATIONS

1. QUESTION SELECTION:

- Click/tap radio button or option text
- Keyboard: Arrow keys to navigate, Space to select
- Visual feedback: Immediate selection indication
- Auto-save: Answer saved within 500ms of selection

2. NAVIGATION:

- Next/Previous: Button clicks or keyboard arrows
- Question jump: Click question number in navigator
- Breadcrumb: Progress indicator shows current position

- URL routing: Each question has unique URL for refresh
3. TIMER INTERACTIONS:
 - Passive display: No user interaction required
 - Warnings: Modal alerts at critical time thresholds
 - Auto-submit: Automatic submission at 00:00
 - Server sync: Regular synchronization with server time
 4. ERROR HANDLING:
 - Graceful degradation: Core functionality preserved
 - Retry mechanisms: Automatic and manual retry options
 - User feedback: Clear error messages and recovery steps
 - Data preservation: Answers saved locally during errors
 5. SUBMISSION FLOW:
 - Review screen: Summary before final submission
 - Confirmation: Double confirmation for final submit
 - Loading state: Clear indication during processing
 - Success feedback: Immediate confirmation of submission

Performance Patterns

PERFORMANCE OPTIMIZATIONS

1. LOADING STRATEGIES:
 - Progressive loading: Core content first
 - Preloading: Next question content in background
 - Caching: Local storage for static resources
 - Compression: Optimized assets and API responses
2. REAL-TIME UPDATES:
 - WebSocket: Timer synchronization
 - Auto-save: Answer persistence every 5 seconds
 - Heartbeat: Connection monitoring
 - Offline detection: Network status awareness
3. MEMORY MANAGEMENT:
 - Component cleanup: Proper unmounting
 - Event listeners: Cleanup on navigation
 - Data structures: Efficient state management
 - Garbage collection: Minimize memory leaks
4. RENDER OPTIMIZATION:
 - Virtual scrolling: Large question lists
 - Memoization: Expensive calculations cached
 - Code splitting: Lazy loading of non-critical features
 - Bundle optimization: Tree shaking and minification

Implementation Guidelines

Technical Specifications

DEVELOPMENT STANDARDS

- 1. REACT IMPLEMENTATION:
 - Functional components with hooks
 - TypeScript for type safety
 - Context API for global state
 - Custom hooks for reusable logic
- 2. STYLING APPROACH:
 - CSS Modules or Styled Components
 - Design system with consistent tokens
 - Responsive design with mobile-first approach
 - Accessibility-focused styling
- 3. STATE MANAGEMENT:
 - Exam state: Current question, answers, timer
 - User state: Authentication, profile, session
 - UI state: Loading, errors, modals, navigation
 - Persistence: Local storage for recovery
- 4. API INTEGRATION:
 - RESTful endpoints for CRUD operations
 - WebSocket for real-time timer synchronization
 - Error handling with exponential backoff
 - Request/response interceptors for authentication
- 5. TESTING STRATEGY:
 - Unit tests: Component logic and utilities
 - Integration tests: API interactions and flows
 - End-to-end tests: Complete user journeys
 - Accessibility tests: WCAG compliance verification

Quality Assurance

QA CHECKLIST

- ✓ Cross-browser compatibility (Chrome, Firefox, Safari, Edge)
- ✓ Mobile responsiveness across device sizes
- ✓ Accessibility compliance (WCAG 2.1 AA)
- ✓ Performance benchmarks met (< 2s load time)
- ✓ Security measures implemented (JWT, HTTPS, validation)
- ✓ Error handling covers all failure scenarios
- ✓ User feedback mechanisms working correctly
- ✓ Timer accuracy and synchronization verified
- ✓ Data persistence and recovery tested
- ✓ Submission process validated end-to-end

PERFORMANCE TARGETS:

- First Contentful Paint: < 1.5s
- Largest Contentful Paint: < 2.5s
- First Input Delay: < 100ms
- Cumulative Layout Shift: < 0.1
- Time to Interactive: < 3s

Documentation Standards

This wireframe specification follows industry best practices for UX/UI design documentation:

1. **Comprehensive Coverage:** All user journeys and edge cases documented
2. **Component Reusability:** Modular design system approach
3. **Accessibility First:** WCAG 2.1 AA compliance built into design
4. **Mobile-First Design:** Responsive design with progressive enhancement
5. **Performance Considerations:** Optimization strategies embedded in design
6. **Developer Handoff:** Clear specifications for implementation
7. **User-Centered Design:** Based on user needs and behavioral patterns
8. **Scalability:** Design system allows for future feature additions

This text-based wireframe specification provides a comprehensive foundation for developing a professional-grade exam-taking platform that meets modern web standards and user expectations.